

VOLVO XC90

OWNER´S MANUAL

WEB EDITION

DEAR VOLVO OWNER

THANK YOU FOR CHOOSING VOLVO

We hope that you will enjoy many years of driving pleasure in your Volvo. The car has been designed for the safety and comfort of you and your passengers. Volvo is one of the safest cars in the world. Your Volvo has also been designed to satisfy all current safety and environmental requirements.

In order to increase your enjoyment of the car, we recommend that you familiarise yourself with the equipment, instructions and maintenance information contained in this owner's manual.



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Introduction

Owner's Manual

A good way of getting to know your new car is to read the owner's manual, ideally before your first journey. This will give you the opportunity to familiarise yourself with new functions, to see how best to handle the car in different situations, and to make the best use of all the car's features. Please pay attention to the safety instructions contained in the manual:

WARNING

"Warning!" texts indicate where there is a risk of personal injury in the event of the instructions not being followed.

IMPORTANT

"Important!" texts indicate a risk of damage to the car in the event of the instructions not being followed.

The equipment described in the owner's manual is not present in all models. In addition to standard equipment, this manual also describes options (factory fitted equipment) and certain accessories (extra equipment).

NOTE

Volvo cars are adapted for the varying requirements of different markets, as well as for national or local legal requirements and regulations.

The specifications, design features and illustrations in this owner's manual are not binding. We reserve the right to make modifications without prior notice.

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Volvo Cars and the environment

Volvo Car Corporation's environmental philosophy



Environmental care, safety and quality are the three core values which influence all operations of the Volvo Car Corporation. We also believe that our customers share our consideration for the environment.

Your Volvo complies with strict international environmental standards and is also manufactured in one of the cleanest and most resource-efficient plants in the world. Volvo Car Corporation has global certification to the ISO 14001 environmental standard, which supports work within the area of the environment.

EPI (Environmental Product Information) is supplied for all Volvo models. You can now compare the environmental impact of different models and engines during the entire lifecycle.

Read more at www.volvocars.com/EPI.

Fuel consumption

Volvo cars have competitive fuel consumption in each of their respective classes. Lower fuel consumption generally results in lower emission of the greenhouse gas, carbon dioxide.

It is possible for the driver to influence fuel consumption. For more information read under the heading Reducing environmental impact on page 9.

Volvo Cars and the environment

Efficient emission control

Your Volvo is manufactured following the concept **Clean inside and out** – a concept that encompasses a clean interior environment as well as highly efficient emission control. In many cases the exhaust emissions are well below the applicable standards.

In addition there is a special radiator coating, PremAir ® [1], which can convert hazardous ground-level ozone into pure oxygen when the ozone passes the radiator. The higher the ozone content in the air the more ozone is converted.

Clean air in the passenger compartment

A passenger compartment filter prevents dust and pollen from entering the passenger compartment via the air intake.

A sophisticated air quality system, IAQS[2] (Interior Air Quality System) ensures that the incoming air is cleaner than the air in the traffic outside.

The system consists of an electronic sensor and a carbon filter. The incoming air is monitored continuously and if there is an increase in the level of certain unhealthy gases such as carbon monoxide then the air intake is closed. Such a situation may arise in heavy traffic, queues and tunnels for example.

The entry of nitrous oxides, ground-level ozone and hydrocarbons is prevented by the carbon filter.

Textile standard

The interior of a Volvo is designed to be pleasant and comfortable, even for people with contact allergies and for asthma sufferers. All of our upholstery and interior textiles are tested with respect to certain unhealthy substances and allergens as well as emissions. This means that all textiles fulfil the requirements in the Öko-Tex 100 standard[3], a major advance towards a healthier passenger compartment environment.

Öko-Tex certification covers seatbelts, carpets, thread and fabrics for example. The leather in the upholstery undergoes chromium-free tanning with natural plant substances and fulfils the certification requirements.

Volvo workshops and the environment

Regular maintenance creates the conditions for a long service life for the car with low fuel consumption, and this way you contribute to a cleaner environment. When Volvo's workshops are entrusted with the repair and maintenance of the car, it becomes part of our system. We make clear demands regarding the way in which our workshops are designed in order to prevent spills and discharges into the environment. Our workshop staff have the knowledge and the tools required to guarantee good environmental care.

[1] Option for 5-cylinder engines.
PremAir ® is a registered trademark of Engelhard Corporation.

[2] Option

[3] More information on www.oekotex.com

Reducing environmental impact

You can help reduce environmental impact, for example, by driving economically by purchasing eco-labelled car care products and by servicing and maintaining the car according to the instructions in the owner's manual.

The following hints will help you to do your bit for the environment:

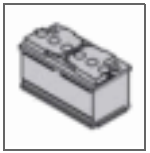
- Decrease fuel consumption by choosing ECO tyre pressure, see page 155.
- Since a roof load and ski box increase air resistance, leading to significantly higher fuel consumption, they should be removed immediately after use.



- Remove unnecessary items from the car - the greater the load the higher the fuel consumption.
- Is your car equipped with an engine block heater? If so, use it for a few hours before starting from cold to reduce fuel consumption and exhaust emissions.
- Drive gently and avoid braking too hard.
- Drive in the highest gear possible. Low engine speeds result in lower fuel consumption.



- Ease back on the accelerator on downhill gradients.
- Use engine braking to slow down.
- Avoid idling. Take consideration of local regulations. Switch off the engine in traffic queues.
- Always dispose of environmentally hazardous waste, such as batteries and oils, in an environmentally safe manner. If uncertain, consult an authorised Volvo workshop for advice.



- Service your car regularly.
- High speed increases consumption considerably due to increased wind resistance. A doubling of speed increases wind resistance four times.

These hints will help you to reduce your fuel consumption without increasing your travel time or lessening the enjoyment of driving. Apart from being kind to your car, you'll be saving money - and the Earth's resources.

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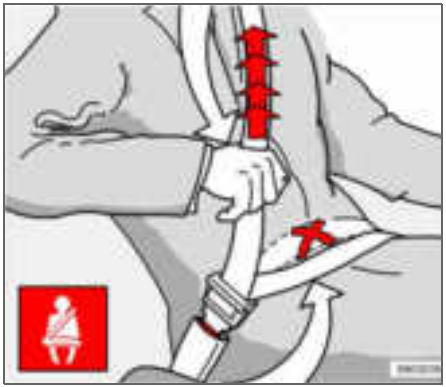
SAFETY



01

Seatbelts

Always use a seatbelt



Tensioning the hip strap. The belt must be positioned low down.

Heavy braking can have serious consequences if seatbelts are not used. Ensure that all passengers use their seatbelts.

Putting on a seatbelt:

– Pull the belt out slowly and secure it by pressing the buckle into the lock. A loud "click" indicates that the belt has locked.

Releasing the belt

– Press the red lock button and let the belt retract. If the belt does not retract fully, feed the belt in by hand so that it does not hang lose.

The belt locks and cannot be withdrawn

- if it is pulled out too quickly.
- during braking and acceleration.
- if the car leans heavily

It is important that the belt lies against the body so it can provide maximum protection. Do not lean the backrest too far back. The seatbelt is designed to protect in a normal seating position.

Keep in mind the following:

- do not use clips or anything else that can prevent the belt from fitting properly.
- ensure the belt is not be twisted or caught on anything.
- the hip strap must be positioned low down (not over the abdomen).
- tension the hip strap over the lap by pulling the diagonal shoulder belt as illustrated.

WARNING

The seatbelts and airbags interact. If a seatbelt is not used or is used incorrectly, this may diminish the protection provided by the airbag in the event of a collision.

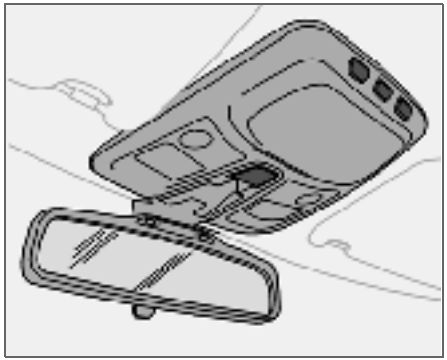
WARNING

Each belt is intended for one person only.

WARNING

Never modify or repair the belt yourself. Contact an authorised Volvo workshop. If the belt has been subjected to a major load, such as in a collision, the entire belt must be replaced. Some of the belt's protective properties may have been lost even if the belt does not appear damaged. The belt should also be replaced if it shows signs of wear or damage. The new belt must be type-approved and designed for installation at the same location as the replaced belt.

Seatbelt reminder



Unbelted occupants will be reminded to fasten their seatbelts through an audio and visual reminder. The audio reminder is speed-dependent. The visual reminder is located in the roof console and the combined instrument panel. At low speed, the audio reminder will sound for the first six seconds.

Child seats are not covered by the seatbelt reminder system.

Rear seat

The seatbelt reminder in the rear seat has two subfunctions:

- To provide information on which seatbelts are being used in the rear seat (shown in the information display). The message is automatically cleared after approx. 30 seconds or can be acknowledged manually by pressing the **READ** button.
- To provide a warning if one of the rear seatbelts is unfastened during travel. This warning takes the form of a message in the information display along with the audio and visual signal. The warning ceases when the seatbelt is re-fastened or when manually acknowledged by pressing the **READ** button.

The message in the information display showing which belts are in use is always available. Press the **READ** button to see stored messages.

Certain markets

An unbelted driver will be reminded to fasten his or her seatbelt through an audio and visual reminder. At low speed, the audio reminder will sound for the first six seconds.

Seatbelts and pregnancy



The seat belt should always be worn during pregnancy. But it is crucial that it be worn in the correct way. The diagonal section should wrap over the shoulder then be routed between the breasts and to the side of the abdomen. The lap section should lay flat over the thighs and as low as possible under the abdomen. It must never be allowed to ride upward. Remove all slack from the belt and insure that it fits close to the body without any twists.

As a pregnancy progresses, pregnant drivers should adjust their seats and steering wheel such that they can easily maintain control of

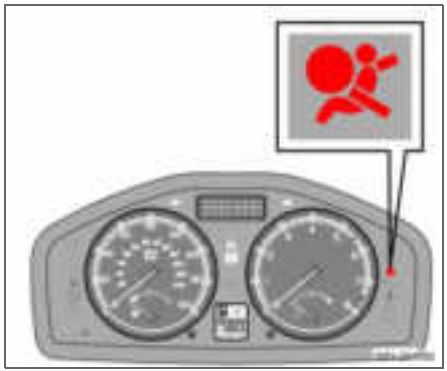
Seatbelts

the vehicle as they drive (which means they must be able to easily operate the foot pedals and steering wheel). Within this context, they should strive to position the seat with as large a distance as possible between their abdomen and the steering wheel.

Seatbelt tensioner

All the seatbelts (except the centre rear belt) are equipped with belt tensioners. A mechanism in the belt tensioner tightens the belt around the body in the event of a sufficiently violent collision. This provides more effective restraint for passengers.

Warning symbol in combined instrument panel



The airbag system[1] is continually monitored by the system control module. The warning symbol in the combined instrument panel illuminates when the ignition key is turned to position **I**, **II** or **III**. The symbol goes out after approx. seven seconds provided the airbag system[1] is fault-free.



As well as the warning symbol, a message may appear on the information display in appropriate cases. If the warning symbol malfunctions, the warning triangle illuminates and the message **SRS AIRBAG SERVICE URGENT** appears in the information display. Contact an authorised Volvo workshop urgently.

WARNING

If the warning symbol for the Airbag system remains on or illuminates while driving, it means that the Airbag system is not functioning fully. The symbol can indicate a fault in the seatbelt tensioner system, SIPS, the SRS system or the IC system. Contact an authorised Volvo workshop immediately.

[1] Includes SRS and seatbelt tensioner, SIPS and IC.

Airbags (SRS)

Airbag (SRS) on the driver's side



The car has an SRS airbag (Supplemental Restraint System) in the steering wheel to supplement the protection afforded by the seatbelt. This airbag is fitted into the centre of the steering wheel. The steering wheel is marked **SRS AIRBAG**.

WARNING

The seatbelts and airbags interact. If a seatbelt is not used or is used incorrectly, this may diminish the protection provided by the airbag in the event of a collision.

Passenger airbag (SRS)



The car has an SRS airbag (Supplemental Restraint System) to supplement the protection afforded by the seatbelt. The passenger airbag [1] is fitted behind a panel above the glovebox. This panel is marked **SRS AIRBAG**.

[1] Not all cars have a passenger airbag (SRS). This can be unselected when the car is ordered.

WARNING

To minimise the risk of injury if the airbag deploys, passengers must sit as upright as possible with their feet on the floor and backs against the backrest. Seatbelts must be secured.

WARNING

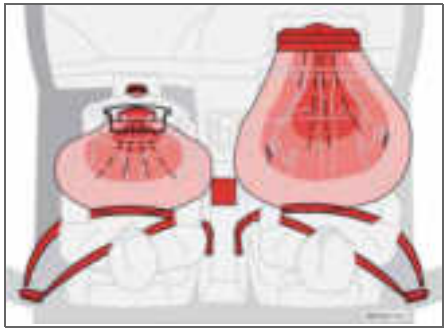
Never place a child in a child seat or on a booster cushion in the front seat if the airbag (SRS) is activated.[1]

Never allow a child to stand or sit in front of the front passenger seat. No one shorter than 140 cm should sit in the front passenger seat if the airbag (SRS) is activated.

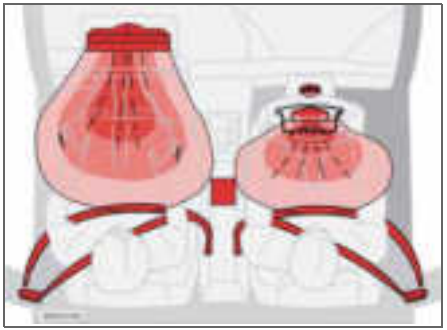
Failure to follow the advice given above can endanger the life of the child.

[1] For information on activated/deactivated airbag (SRS) see page 19.

SRS system



SRS system, left-hand drive.



SRS system, right-hand drive.

The system consists of airbags and sensors. A sufficiently violent collision trips the sensors and the airbag(s) are inflated with hot gas. To cushion the impact, the airbag deflates when compressed. When this occurs, smoke escapes into the car. This is completely normal. The entire process, including inflation and deflation of the airbag, occurs within tenths of a second.

NOTE

The sensors react differently depending on the course of the collision and whether the seatbelts on the driver and passenger side are used. It is therefore possible that only one (or none) of the airbags may inflate in a collision. The SRS system senses the force of the collision on the car and adapts accordingly so that one or more airbags is deployed.

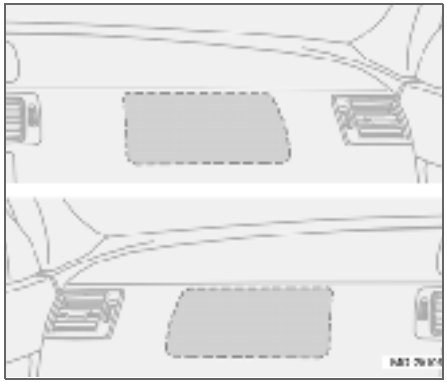
NOTE

The airbags have a function whereby their capacities are adapted to the collision force to which the car is subjected.

WARNING

Repairs must only be performed by an authorised Volvo workshop.
Any interference in the system could cause malfunction and serious injury.

Airbags (SRS)



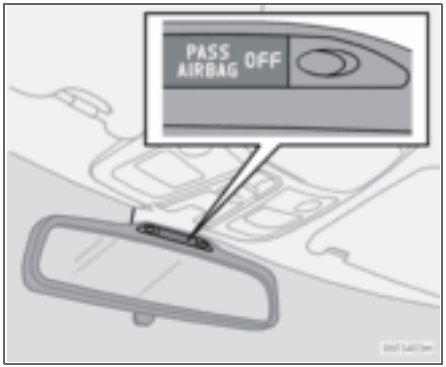
Location of the passenger airbag in left-hand drive and right-hand drive cars.

WARNING

Never interfere with SRS components in the steering wheel or the panel above the glovebox.

Objects and accessories must not be positioned or glued on or near the **SRS AIRBAG** panel (above the glovebox) or in the area affected by a deployed airbag.

PACOS (option)



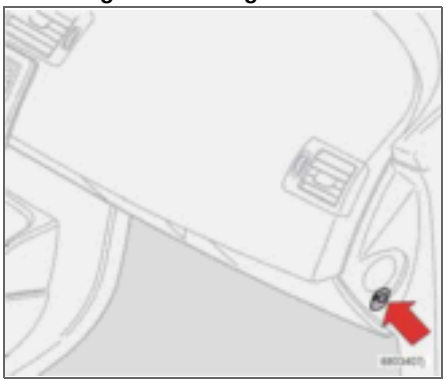
Indicator showing that the passenger airbag (SRS) is deactivated.

The airbag (SRS) for the front passenger seat can be deactivated using a switch. This is necessary if a child seat is to be fitted there for example.

Indicator

A text message on the roof panel indicates that the passenger airbag (SRS) is deactivated.

Activating/deactivating



Switch for PACOS (Passenger Airbag Cut Off Switch).

The switch is located on the passenger end of the dashboard and is accessible when the passenger door is open. Check that the switch is in the required position. Volvo recommends that that the ignition key is used to change position. (Other items with a shape similar to a key can be used).

WARNING

If the car is equipped with a front passenger airbag (SRS), but does not have PACOS, the airbag will always be activated.

WARNING

Activated airbag (passenger seat):
Never place a child in a child seat or on a booster cushion in the front passenger seat when the airbag is activated. This also applies to anyone shorter than 140 cm.

Deactivated airbag (passenger seat):
No one taller than 140 cm should ever sit in the front passenger seat when the airbag is deactivated.

Failure to follow the advice given above can endanger life.

Activating/deactivating the airbag (SRS)

Switch position



Switch for SRS in ON position.

ON = Airbag (SRS) activated. With the switch in this position, persons taller than 140 cm can sit in the front passenger seat, but never children in a child seat or on a booster cushion.



Switch for SRS in OFF position.

OFF = Airbag (SRS) is deactivated. With the switch in this position, children in a child seat or on a booster cushion can sit in the front passenger seat, but never persons taller than 140 cm.

WARNING

Do not allow anyone to sit in the front passenger seat if the text message in the roof panel indicates that the airbag (SRS) is deactivated and the airbag warning symbol is displayed in the combined instrument panel. This indicates that there has been a severe malfunction. Visit an authorised Volvo workshop urgently.

Side airbags – SIPS bag



Side airbag locations.

A large proportion of the collision force is transferred by the SIPS (Side Impact Protection System) to beams, pillars, the floor, the roof and other structural parts of the body. The side airbags at the driver's and front passenger seats protect the chest area and are an important part of the SIPS. The side airbags are located in the front seat backrests.



Inflated side airbag.

WARNING

Side airbags are a supplement to the SIPS system. Always wear a seatbelt.

WARNING

Repairs must only be performed by an authorised Volvo workshop.

Work on the SIPS system can cause malfunction and result in serious personal injury.

WARNING

Do not put objects in the area between the outside of the seat and the door panel, since this area is required by the side airbag.

WARNING

Use only Volvo genuine car seat covers, or seat covers approved by Volvo. Other seat covers may impede the operation of the side air bags.

Child seats and side airbags

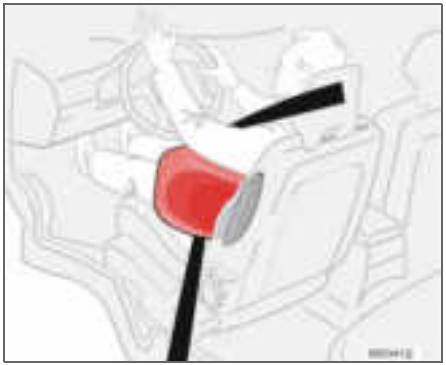
The side airbag does not diminish the protection provided by the car to children seated in a child seat or on a booster cushion.

A child seat or booster cushion can be placed on the front passenger seat provided that the car does not have an activated[1] passenger airbag.

[1] For information on activated/deactivated airbag (SRS) see page 19

Side airbags (SIPS bags)

SIPS bags



Driver's side

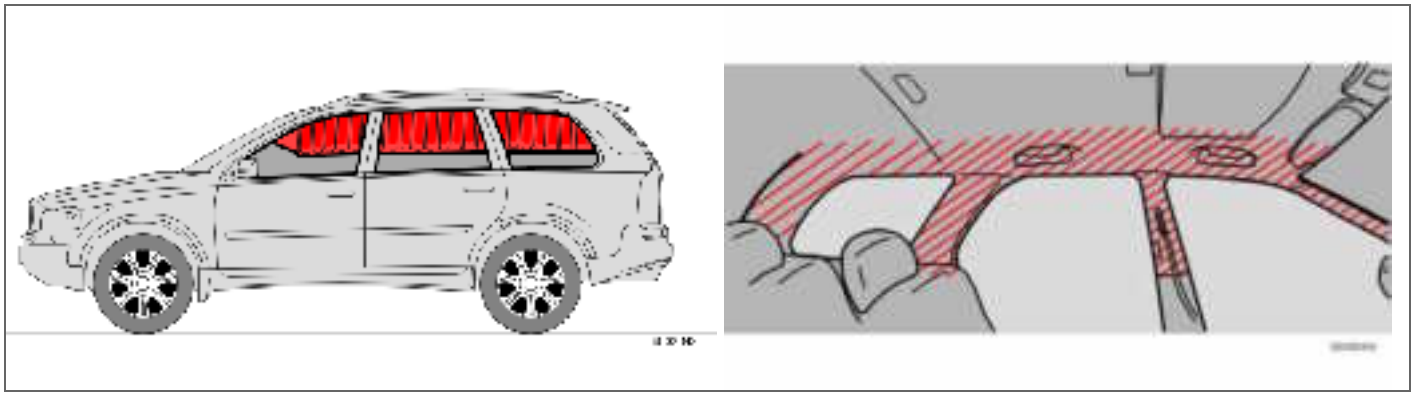


Passenger side

The SIPS bag system consists of side airbags and sensors. A sufficiently violent collision trips the sensors and the side airbags are inflated. The airbag inflates between the occupant and the door panel and thereby cushions the initial impact while deflating. The side airbag is normally only deployed on the side of the collision.

Inflatable Curtain (IC)

Properties



The inflatable curtain, IC (Inflatable Curtain), is a supplement to the SIPS system. It is fitted in the headlining along both sides of the roof and protects both front and rear seat passengers. The inflatable curtain is activated by sensors in the event of a sufficiently violent collision and the inflatable curtain inflates. The inflatable curtain helps to prevent the driver and passengers from striking their heads on the inside of the car during a collision.

WARNING

Never hang or fasten anything on the roof handles. The hook is only intended for light outer garments (not for hard objects such as umbrellas).

Do not screw or fit anything to the headlining, door pillars or side panels. This could compromise the intended protection. Only use Volvo genuine parts that are approved for placement in these areas.

WARNING

Do not load the car higher than 50 mm under the top edge of the rear passenger windows. Otherwise, the intended protection of the inflatable curtain, which is hidden in the headlining, may be compromised.

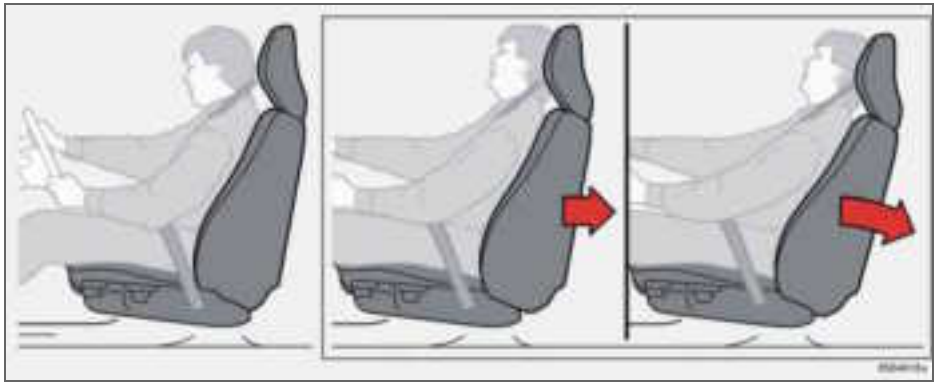
WARNING

The inflatable curtain is a supplement to the seatbelts.

Always use a seatbelt.

WHIPS

Protection against whiplash injury – WHIPS



The whiplash protection system (WHIPS) consists of energy absorbing backrests and specially designed head restraints for the front seats. The system is actuated by a rear-end collision, where the angle and speed of the collision, and the nature of the colliding vehicle all have an influence.

WARNING

The WHIPS system is a supplement to the seatbelts. Always wear your seatbelt.

Properties of the seat

When the WHIPS system is deployed, the front seat backrests fall backward to alter the position of the driver and front seat passenger. This diminishes the risk of whiplash injury.

WARNING

Never modify or repair the seat or WHIPS system yourself. Contact an authorised Volvo workshop.

WHIPS system and child seats/ booster cushions

The WHIPS system does not diminish the protection provided by the car to children seated in a child seat or on a booster cushion.

Correct seating position

For the best possible protection, the driver and front seat passenger should sit in the centre of the seat with as little space as possible between the head and the head restraint.

Do not obstruct the WHIPS system





WARNING

Do not squeeze rigid objects between the rear seat cushion and the front seat backrest. Make sure you do not to obstruct the function of the WHIPS system.

WARNING

If a rear seat backrest is folded down, the corresponding front seat must be moved forward so that it does not touch the folded backrest.

WARNING

If a seat has been subjected to extreme forces, such as due to a rear-end collision, the WHIPS system must be checked by an authorised Volvo workshop.

Part of the WHIPS system's protective capacity may have been lost even if the seat appears to be undamaged.

Contact an authorised Volvo workshop to have the system checked even after a minor rear-end collision.

ROPS

ROPS

Volvo's Roll-Over Protection System has been designed to reduce the risk of the car overturning and to provide the best possible protection in the event of an accident.

The system consists of:

- A stabiliser system, RSC (Roll Stability Control) that minimises the risk of overturning during sudden evasive manoeuvres or the like or if the car skids.
- Increased protection for the driver and passengers through a reinforced body, inflatable curtains and seatbelt tensioners in all seats. See also page 14 and page 23.

The RSC system uses a gyro sensor which registers changes in the car's lateral inclination angle. This information is then used to calculate the risk for overturning. If a risk is detected, the DSTC system is engaged, engine speed is reduced and one or more wheels are braked until the car returns to a stable position.

For more information on the DSTC system, see page 46 and page 125.

WARNING

Under normal driving conditions, the RSC system improves the car's road safety, but this must not be taken as a reason to increase speed. Always follow the usual precautions for safe driving.

When the systems deploy

System	Triggered
Seatbelt tensioner	In a frontal collision and/or side-impact accident and/or overturning.
Airbags SRS	In a frontal collision[1].
Side airbags SIPS	In a side-impact accident[1].
Inflatable Curtain IC	In a side-impact accident[1].
Whiplash protection WHIPS	In a rear-end collision.
RSC	During sudden evasive manoeuvres or the like or if the car skids.

[1]The bodywork of the car could be greatly deformed in a collision without airbag deployment. A number of factors such as the rigidity and weight of the object hit, the speed of the car, the angle of the collision etc. affects how the different safety systems of the car are activated.

If the airbags have been deployed, the following is recommended:

- Have the car transported to an authorised Volvo workshop. Do not drive with deployed airbags.
- Have an authorised Volvo workshop replace components in the car's safety system.
- Always contact a doctor.

NOTE

The SRS, SIPS, IC and belt tensioner systems are deployed only once during a collision.

WARNING

The airbag control module is located in the centre console. If the centre console is drenched with water or other liquid, disconnect the battery cables. Do not attempt to start the car since the airbags may deploy. Have the car transported to an authorised Volvo workshop.

WARNING

Never drive with deployed airbags. They can make steering difficult. Other safety systems may also be damaged. The smoke and dust created when the airbags are deployed can cause skin and eye irritation after intensive exposure. In case of irritation, wash with cold water. The rapid deployment sequence and airbag fabric may cause friction injury and burns to the skin.

Child safety

Children should sit comfortably and safely



The position of a child in the car and the choice of equipment is dictated by the child's weight and size, for more information see page 30.

NOTE

Regulations regarding the placement of children in cars vary from country to country. Check what laws apply.

Children of all ages and sizes must always sit correctly secured in the car. Never allow a child to sit on the knee of a passenger.

Volvo's own child safety equipment is designed for your car. Use Volvo genuine equipment to best ensure that the mounting points and attachments are correctly positioned and are sufficiently strong.

You may place:

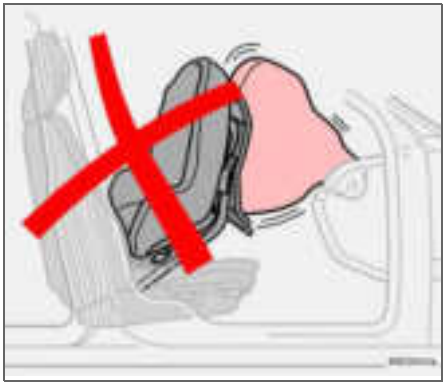
- a child seat or booster cushion on the front passenger seat, provided the passenger airbag is not activated[1].
- a rear-facing child seat in the rear seat that uses the back of the front seat as support.

Child seat and seatbelt reminder

If a rear-facing infant or child seat is placed in the front seat and secured using the seatbelt, the seatbelt reminder might not be activated. Always check that the belt is locked before driving off!

[1] For information on activated/deactivated airbag (SRS) see page 19.

Child seats and airbags

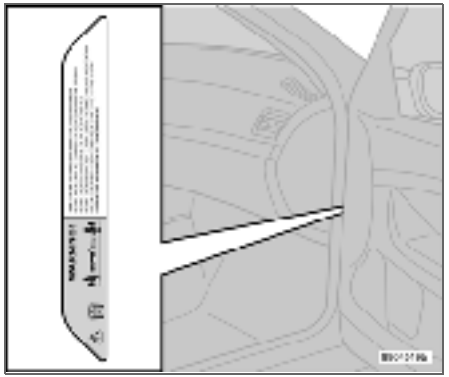


Child seats and airbags are not compatible.

Always place a child in the rear seat if the passenger airbag is activated[1]. A child in a child seat on the front passenger seat may suffer serious injury if the airbag deploys.

WARNING

Persons shorter than 140 cm may only sit in the front passenger seat if the passenger airbag is deactivated.



Location of airbag decal in door opening on front passenger side.



Decal located on dashboard end face.



Decal located on instrument panel end face (Australia only).

WARNING

Never place a child in a child seat or on a booster cushion in the front seat if the air-bag (SRS) is activated[1]. Failure to follow this advice can endanger the life of the child.

[1] For information on activated/deactivated air-bag (SRS) see page 19.

Child safety

Placement of children in the car

Weight/age	Front passenger seat with activated[1] airbag (SRS)	Front passenger seat without (or with deactivated[1]) airbag (SRS) (option)
<10 kg (0–9 months)	Not suitable for this age group.	Alternatives: • Rear-facing child seat, secured with seatbelt and straps. Type approval: E503135[2] • Rear-facing infant seat, secured in seatbelt. Type approval: E5 03160[2] • Rear-facing infant seat, secured in Isofix attachment. Type approval: E5 03162[2]
9–18 kg (9–36 months)	Not suitable for this age group.	Alternatives: • Rear-facing child seat, secured with seatbelt and straps. Type approval: E5 03135[2] • Rear-facing child seat, secured in seatbelt. Type approval: E5 03161[2] • Rear-facing child seat, secured in Isofix attachment. Type approval: E5 03163[2]
15–36 kg (3–12 years)	Not suitable for this age group.	Booster cushion with or without backrest. Type approval: E5 03139

[1]For information on activated/deactivated airbag (SRS) see page 16.

[2]Suitable for certain child seats as listed in the specified type approval. Child seats can be vehicle-specific, limited, semi-universal or universal.

Child safety

Weight/age	Second row of seats, outer seats[1]	Second row of seats, centre seat[1]	Third row of seats in cars seating seven.
<10 kg (0–9 months)	Alternatives: • Rear-facing child seat, secured with seatbelt, support legs and straps. Type approval: E5 03135[2] • Rear-facing infant seat, secured with seatbelt and support legs. Type approval: E5 03160[2] • Rear-facing infant seat, secured with Isofix attachment and support legs. Type approval: E5 0316[2]	Rear-facing child seat, secured with seatbelt, support legs and straps. Type approval no. E5 03135[2]	Not suitable for this age group.
9–18 kg (9–36 months)	Alternatives: • Rear-facing child seat, secured with seatbelt, support legs and straps. Type approval: E5 031352[2] • Rear-facing child seat, secured with seatbelt and support legs. Type approval: E5 03161[2] • Rear-facing child seat, secured with Isofix attachment and support legs. Type approval: E5 03163[2]	Rear-facing child seat, secured with seatbelt, support legs and straps. Type approval no. E5 03135[2]	Not suitable for this age group.
15–36 kg (3–12 years)	Booster cushion with or without backrest. Type approval: E5 03139[2]	Alternatives: • Booster cushion with or without backrest. Type approval no. E5 03139[2] • Integrated booster cushion. Type approval no. E5 03167[2]	Booster cushion with or without backrest. Type approval no. E5 03139[2]

[1]In cars seating seven, the seat row must be in its rearmost position when using a child seat.

[2]Suitable for certain child seats as listed in the specified type approval. Child seats can be vehicle-specific, limited, semi-universal or universal.

Child safety

Integrated booster cushions (option)



Volvo's integrated booster cushion for the outer rear seats is specially designed to provide optimum safety for children. Combined with the regular seatbelts, the booster cushion is approved for children weighing between 15 and 36 kg.

WARNING

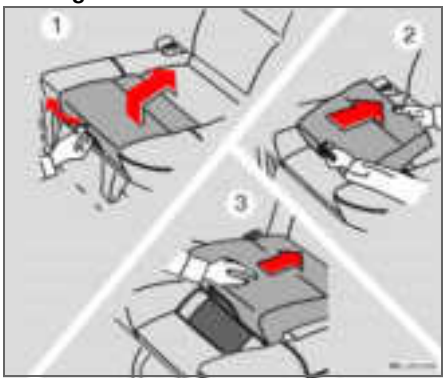
Never place a child in a child seat or on a booster cushion in the front seat if the airbag (SRS) is activated.

No one shorter than 140 cm should sit in the front passenger seat if the airbag (SRS) is activated.[1]

Failure to follow the advice given above can endanger the life of the child.

[1]For information on activated/deactivated airbag (SRS) see page 16.

Raising the booster cushion



– Pull that handle to raise the booster cushion (1).
– Grasp the cushion with both hands and push it backwards (2).
– Push until it locks in place (3).

WARNING

The booster cushion must be in the locked position before the child is placed there.

Check that:

- the seatbelt is locked
- the seatbelt is in contact with the child's body and is not slack or twisted, and that

the belt is positioned correctly across the shoulder.

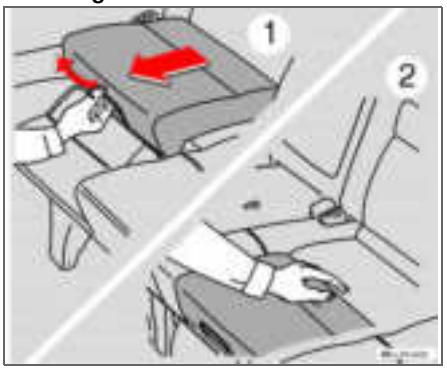
- the lap belt is low over the pelvis for optimum protection.
- the belt does not lie across the child's throat or below the shoulder.
- Carefully adjust the position of the head restraint to suit the child.

WARNING

Repair or replacement should only be performed by an authorised Volvo workshop. Do not make any modifications or additions to the booster cushion.

If an integrated booster cushion has been subjected to a major load, such as in conjunction with a collision, the entire booster cushion must be replaced. Even if the booster cushion appears to be undamaged, it may not afford the same level of protection. The booster cushion must also be replaced if it is heavily worn.

Lowering the booster cushion



– Pull the handle (1).

– Lower the seat and press until it locks (2).

Remember to stow away the booster cushion before lowering the rear seat backrest.

Child safety

Fitting a child seat

Volvo has child safety products that are designed for and tested by Volvo.

WARNING

Booster cushions/child seats with steel braces or some other design that could rest on the seatbelt buckle's opening button must not be used, as they could cause the seatbelt buckle to open accidentally.
Do not allow the upper section of the child seat to rest against the windscreen.

When using other products that are available on the market, it is important to read the fitting instructions included with the product.

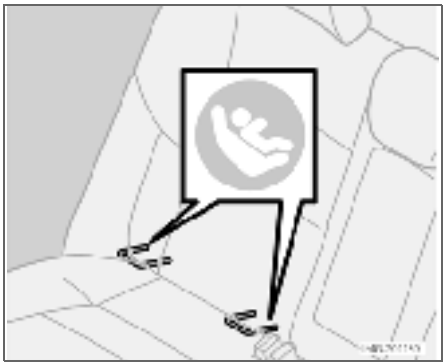
- Do not attach the straps for the child seat to the horizontal adjustment bar, springs, rails or beams under the seat. Sharp edges can damage the straps.
- Allow the back of the child seat to rest against the dashboard. This applies to cars without a passenger airbag, or where the airbag is deactivated.

WARNING

Never place the child seat in the front seat if the car is equipped with an activated[1] front passenger airbag. If problems arise when fitting child safety products, contact the manufacturer for clearer instructions.

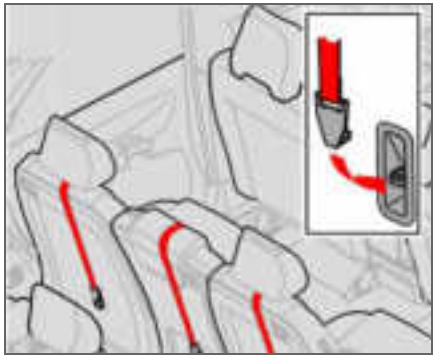
[1]For information on activated/deactivated airbag (SRS) see page 19.

ISOFIX fixture system for child seats (option)



The outer rear seats have ISOFIX attachment points for child seats. Contact a Volvo dealer for further information on child safety equipment.

Mounting points for child seat



The car is equipped with mounting points for child seats. These mounting points are located on the rear of the rear seats.

NOTE

These mounting points are only on the second row of seats in cars seating seven.

Fold the backrest forward to access the mounting points. For detailed information on how to secure the child seat in the upper mounting points, refer to the instructions from the seat manufacturer.

Extra locking function in seatbelt (ALR/ELR)[1]

The seatbelt in the centre of the second row of seats has an extra locking function (ALR/ELR) to help hold the belt taunt in order to facilitate child seat installation.

When installing a child seat with the help of the seatbelt:

- Secure the seatbelt in the child seat following the instructions of the child seat manufacturer.
- Pull out the entire seatbelt.
- Lock the belt by inserting the locking tab in the buckle. A loud "click" indicates that the belt is locked.
- Allow the seatbelt mechanism to retract the belt while stretching it around the child seat. A mechanical sound will be audible from the seatbelt. This is normal.

This function is automatically deactivated when the seatbelt is released from the buckle and retracts back to its starting position.

If there are any problems with installation of child safety products, contact the manufacturer for clearer installation instructions.

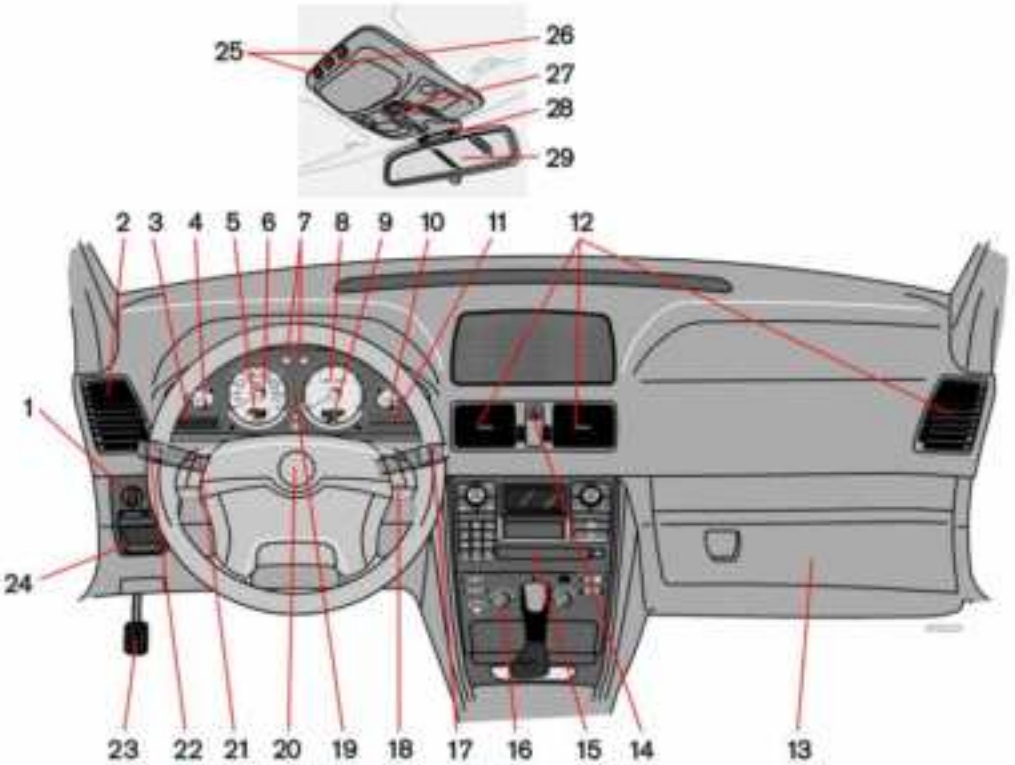
[1] Automatic Locking Retractor/ Emergency Locking Retractor.

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02

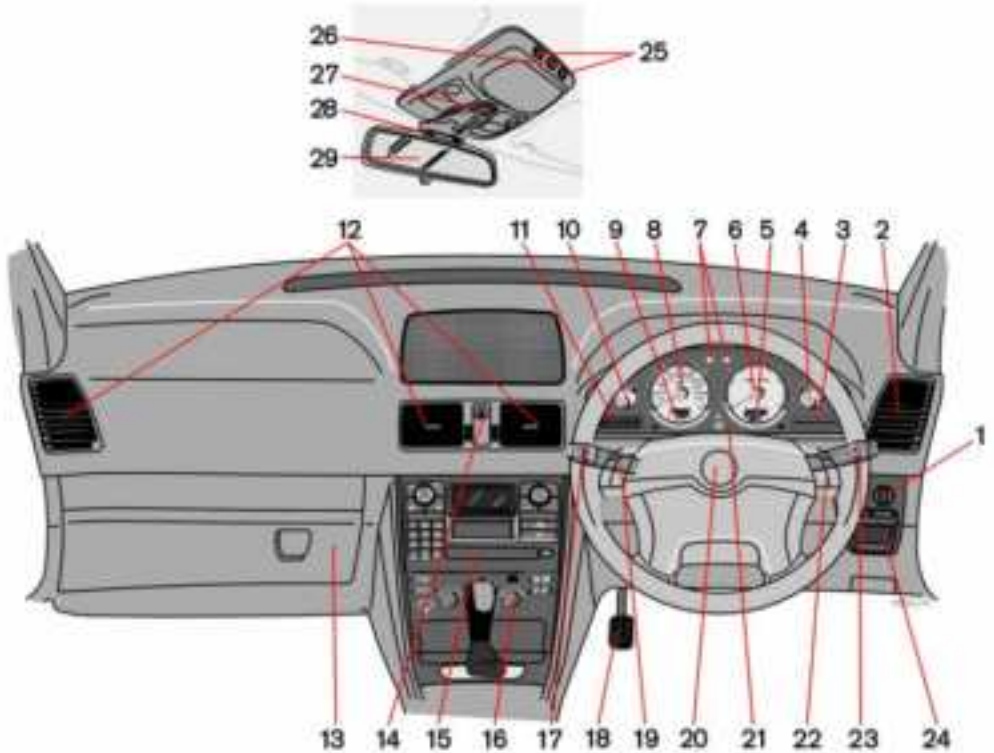
Overview, left-hand drive car



Overview, left-hand drive car

1. Lighting panel
2. Panel vents
3. Display
4. Temperature gauge
5. Odometer, trip meter, cruise control
6. Speedometer
7. Direction indicators
8. Tachometer
9. Outside temperature, clock, gear position
10. Fuel gauge
11. Indicator and warning symbols
12. Panel vents
13. Glovebox
14. Hazard warning flashers
15. Audio system
16. Climate control
17. Windscreen wipers
18. Keypad for phone/audio
19. Combined instrument panel
20. Horn
21. Cruise control
22. Direction indicators, dipped-main beam switch, **READ** button
23. Parking brake
24. Parking brake release
25. Switches, reading lamps
26. Interior lighting
27. Sunroof control
28. Seatbelt reminder
29. Rearview mirror

Overview, right-hand drive car

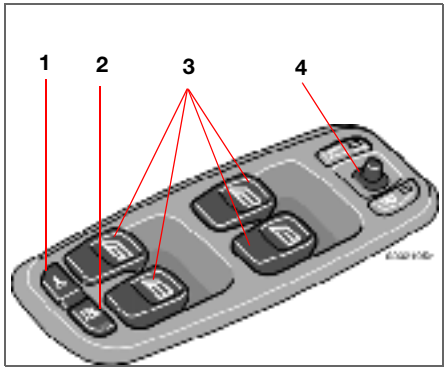


Overview, right-hand drive car

1. Lighting panel
2. Panel vents
3. Indicator and warning symbols
4. Fuel gauge
5. Outside temperature, clock, gear position
6. Tachometer
7. Direction indicators
8. Speedometer
9. Odometer, trip meter, cruise control
10. Temperature gauge
11. Display
12. Panel vents
13. Glovebox
14. Hazard warning flashers
15. Audio system
16. Climate control
17. Direction indicators, dipped-main beam switch, **READ** button
18. Parking brake
19. Cruise control
20. Horn
21. Combined instrument panel
22. Phone/Audio keypad
23. Windscreen wipers
24. Parking brake release
25. Switches, reading lamps
26. Interior lighting
27. Sunroof control
28. Seatbelt reminder
29. Rearview mirror

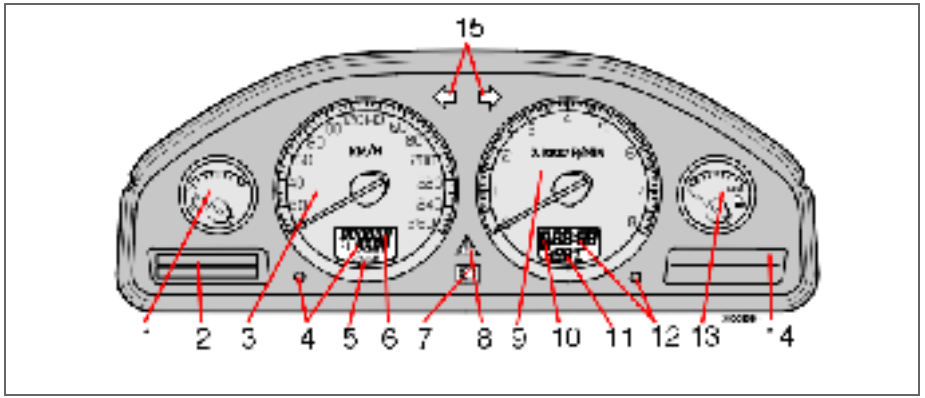
Driver's door control panel

Control panel



1. Lock button, for all doors
2. Blocking power windows in the rear doors
3. Power window controls
4. Door mirror control

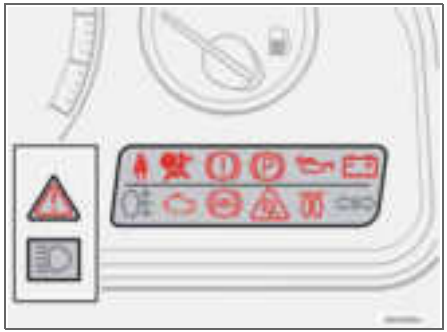
Combined instrument panel



1. Temperature gauge – Displays the temperature of the engine cooling system. A message will appear on the display if the gauge goes into the red zone. Bear in mind that extra lights placed in front of the air intake reduce the cooling capacity of the system.
2. Display – The display shows information and warning messages.
3. Speedometer – Shows the speed of the car.
4. Trip meters T1 and T2 – Used for measuring short distances. The right-hand digit displays tenths of a kilometre. Press the button for more than 2 seconds to reset. Switch between trip meters with one quick press of the button.
5. Cruise control indicator.
6. Odometer – The odometer indicates the total distance the car has travelled.
7. Main beam on/off
8. Warning symbol – If a fault arises, the symbol illuminates and a message is shown in the display.
9. Tachometer – Indicates engine speed in thousands of revolutions per minute (rpm). Do not allow the tachometer gauge to enter the red zone.
10. Automatic gearbox indicator – The selected gearshift programme is displayed here.
11. Outside temperature gauge – When the temperature lies between +2 °C and –5 °C, a snowflake symbol illuminates in the display. This warns of slippery road surfaces. If the car has been stationary, the gauge may display a reading that is too high.
12. Knob for clock – Turn the knob to adjust the time.
13. Fuel gauge– When the lamp illuminates, approximately 8 litres of usable fuel remain in the tank.
14. Indicator and warning symbols
15. Direction indicators – left/right

Indicator and warning symbols

Indicator and warning symbols



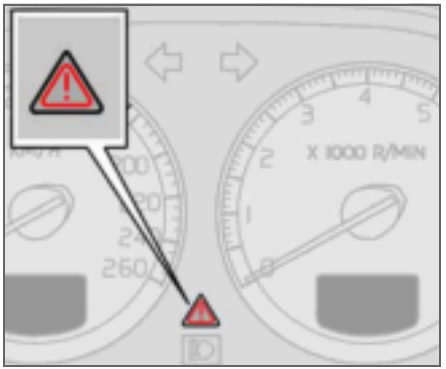
All indicator and warning symbols[1] illuminate when the ignition key is turned to position **II** before starting. This is to check that the symbols are working. When the engine starts, all the symbols should go out except the handbrake symbol, which extinguishes when the handbrake is released.



If the engine does not start within five seconds, all symbols extinguish except the symbols for a fault in the car's emissions system and for low oil pressure. Certain symbols may have no function, depending on the car's specifications.

[1] For certain engine variants, the symbol for low oil pressure is not used. Warnings are given via display text, see page 188.

Symbols in the centre of the instrument panel





These symbols are lit with a red or amber glow depending on the severity of the fault.

Red symbol:

- Stop the car in a safe place. Do not drive the car further.
- Read the information on the information display.
- Rectify the fault as instructed or contact an authorised Volvo workshop.

Symbol and message text are visible until the fault has been rectified.

Yellow symbol:

- Read the message in the display. Remedy!

The message text is cleared using the READ button, see page 47, or it disappears automatically after 2 minutes.

NOTE

When the message text **TIME FOR REGULAR SERVICE** is shown, the symbol lamp and message text are cleared using the **READ** button, or disappear automatically after 2 minutes.

Indicator symbols

ABS fault



If this symbol illuminates, the system is not working. The car's regular brake system continues to work, but without the ABS function.

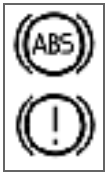
– Stop the car in a safe place and turn off the engine.
– Restart the engine.
– Drive to an authorised Volvo workshop to have the ABS checked if the symbol remains lit.

Fault in brake system



If this symbol lights, the brake fluid level may be too low.

– Stop the car in a safe place and check the level in the brake fluid reservoir, see page 190. If the level in the reservoir is below MIN, the car should not be driven any further. Have the car transported to an authorised Volvo workshop to have the brake system checked.



If the BRAKE and ABS symbols illuminate at the same time, there may be a fault in the brake force distribution system.

– Stop the car in a safe place and turn off the engine.
– Restart the engine.
- If both symbols extinguish, continue driving.
- If the symbols remain on, check the level in the brake fluid reservoir. See page 190.
- If the brake fluid level is normal but the symbols are still lit, the car can be driven, with great care, to an authorised Volvo workshop to have the brake system checked.
- If the level in the reservoir is below **MIN**, the car should not be driven any further. Have the car transported to an authorised Volvo workshop to have the brake system checked.

WARNING

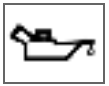
If the BRAKE and ABS symbols are illuminated at the same time, there is a risk that the rear end will skid during heavy braking.

Seatbelt reminder



This symbol lights if someone in a front seat has not put on their belt or if someone in a rear seat has taken off their seatbelt.

Low oil pressure[1]



If the lamp illuminates while driving, engine oil pressure is too low. Stop the engine immediately and check the oil level. Top up as necessary. If the lamp illuminates but the oil level is normal, contact an authorised Volvo workshop.

Fault in car's emissions system



Drive to an authorised Volvo workshop to have the system checked.

Airbags – SRS



If this symbol remains on or illuminates while driving, it means a fault has been detected in the seatbelt buckle, SRS, SIPS, or IC system. Drive directly to an authorised Volvo workshop to have the system checked.

[1] For certain engine variants, the symbol for low oil pressure is not used. Warnings are given via display text, see page 188.

Indicator and warning symbols

Alternator not charging



If this symbol illuminates while driving, there is a fault in the electrical system. Contact an authorised Volvo workshop.

Engine preheater (diesel)



This symbol is illuminated during engine preheating. Preheating occurs when the temperature is below –2 °C. The car can be started once the symbol extinguishes.

Parking brake applied

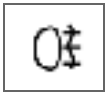


The lamp illuminates when the parking brake is applied. Always pull the parking brake lever to the end position.

NOTE

The lamp illuminates irrespective of how hard the parking brake is applied.

Rear fog lamp



This symbol is lit when the rear fog lamp is on.

Indicator symbol for trailer



This symbol flashes when the direction indicators are used and a trailer is coupled. If the symbol does not flash, one of the lamps on the trailer or the car is defective.

Stability system STC or DSTC



For information on the system's functions and symbols, see page 126.

Reminder – doors not closed

If one of the doors, the bonnet[1] or the tailgate is not properly closed, the driver will be reminded of this.

Low speed

If the car moves at a speed less than approx. 7 km/h, the information symbol illuminates and **DRIVER DOOR OPEN, PASSENGER DOOR OPEN, LEFT REAR DOOR OPEN, BONNET OPEN** or **RIGHT REAR DOOR OPEN**, is shown in the display. Stop the car safely as soon as possible and close the door or bonnet.

High speed



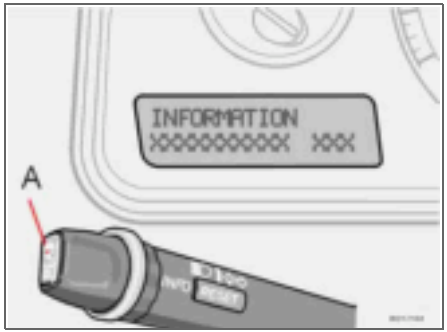
If the car is moving faster than approx. 7 km/h, the symbol illuminates and one of the texts indicated in the previous paragraph appears in the display.

Tailgate reminder

If the tailgate is open, **TAILGATE OPEN** will appear on the display.

[1] Only cars with alarm.

Messages



When a warning or indicator symbol illuminates, a message appears on the information display.

– Press the **READ** button (**A**).

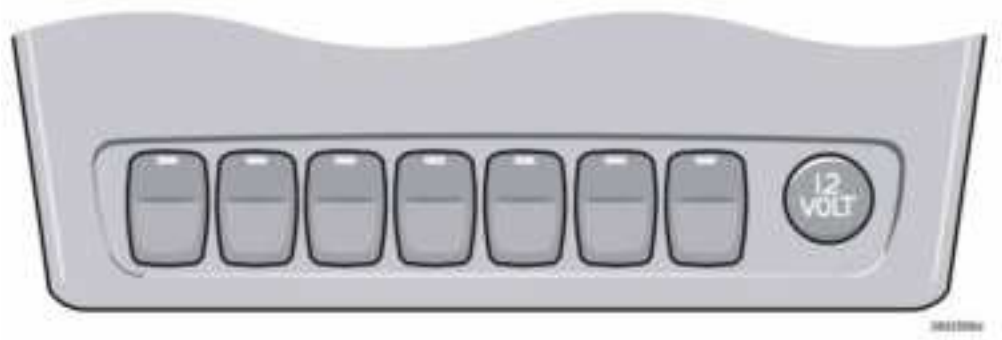
Switch between messages with the **READ** button. Fault messages are stored in the memory until the fault is rectified.

NOTE

If a warning message appears while you are using the trip computer, the message must be read (press **READ**) before the previous activity can be resumed.

Message	Specification
STOP SAFELY	Stop the car in a safe manner and turn off the engine. Serious risk of damage.
STOP ENGINE	Stop the car in a safe manner and turn off the engine. Serious risk of damage.
SERVICE URGENT	Have the car checked by an authorised Volvo workshop immediately.
SEE MANUAL	Read the owner's manual.
SERVICE REQUIRED	Have the car checked by an authorised Volvo workshop as soon as possible.
TIME FOR REGULAR SERVICE	Time for regular service at an authorised Volvo workshop. The timing is determined by the number of kilometres driven, number of months since the last service and engine running time.
SOOT FILTER FULL – SEE MANUAL	Diesel particle filter requires regeneration, see page 116.
STC/DSTC SPIN CONTROL OFF	The function of the stability and traction control system is reduced, see page 125 for more variants.

Switches in the centre console





Air conditioning in the rear of the passenger compartment (option)
Press the button to activate the air conditioning in the rear of the passenger compartment. Rear passenger compartment air conditioning is deactivated when the ignition is completely switched off.

NOTE

The order of the buttons may vary.



Child safety locks in the rear doors (option)
Activating or deactivating the electric child safety locks in the rear doors. The ignition key must be in position **I** or **II**. When the child safety locks are activated, the LED in the button lights. A message is shown in the display when the child safety locks are activated or deactivated.



Retractable power door mirrors (option)
Used to fold in the door mirrors if they are folded out or to fold them out if they are folded in.

Proceed as follows if a door mirror has been accidentally folded in or out:

- Manually adjust the appropriate door mirror to its normal position.
- Turn the ignition key to position **II**.
- Fold the door mirror inward and then outward using the button.

The door mirrors have now returned to their original fixed positions.

Switches in the centre console



Parking assistance (option)
The system is always activated when the car is started. Press the button to deactivate/reactivate the parking assistance system. See also page 127.



Deactivation of the deadlocks[1] and detectors
Use this button when you wish to switch off the deadlock function (doors cannot be opened from the inside when locked). This button can also be used when deactivating the alarm system's movement and tilt detectors[2]. The LED illuminates when these systems are shut down/deactivated.



Auxiliary lamps (accessory)
Use this button to switch the auxiliary lamps on with main beam or to switch them off.

[1] Certain markets

[2] Option



Active Bi-Xenon Lights, ABL (option)
The ABL headlamps' headlamp pattern follows the movements of the steering wheel during driving. The function is activated automatically when the car is started and can be deactivated/activated by pressing the button. The LED in the button illuminates when the function is activated.

Shifting headlamp pattern for right/left-hand traffic
Hold the button depressed for at least 5 seconds. The car must be stationary when the headlamp pattern is shifted. The message **DIPPED BEAM SETT. F. RIGHT TRAFFIC** or **DIPPED BEAM SETT. F. LEFT TRAFFIC** is shown in the display. For more information and adapting headlamp pattern for halogen or Bi-Xenon headlamps, see page 146.



Electric socket, (standard)/ Cigarette lighter (option)
The electric socket can be used for various 12 V accessories, e.g. mobile phone or a cooler box.

The ignition key must be at least in position **I** so that the socket can supply power.

The cigarette lighter is activated by pushing in the button. Once the lighter has been heated, the button pops out again. Pull out the lighter to use it. For safety reasons, always keep the cover in place when the socket is not in use. Maximum current tap 10 A.

WARNING

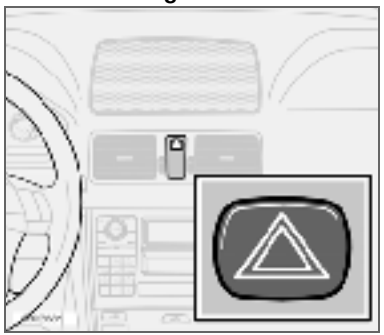
Always leave the plug in the socket when the socket is not in use.



BLIS – Blind Spot Information System (option)
Press the button to deactivate or reactivate the function. See page 129 for further information.

Switches in the centre console

Hazard warning flashers



Use the hazard warning flashers (all direction indicators flash) when the car is stopped where it could be a traffic hazard or obstruction. Press the button to activate the function.

NOTE

Regulations regarding the use of hazard warning flashers vary from country to country.



Rear window and door mirror defrosters

Use the defroster to remove ice and misting from the rear window and door mirrors. Press the switch to start defrosting the rear window and door mirrors. The LED in the switch illuminates.

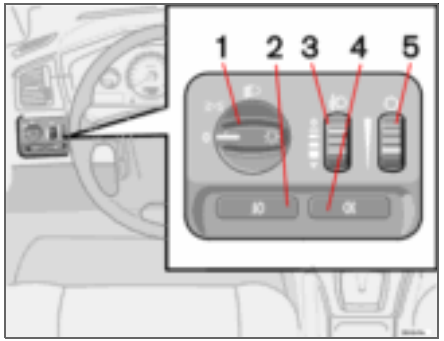
Defrosting is automatically disconnected after about 12 minutes.



Heated front seats

See page 72 or page 74 for further information.

Lighting panel



Position	Specification
0	Automatic/deactivated dipped beam. Only main beam flash.
	Position/parking lamps
	Automatic dipped beam. Main beam and main beam flash work in this position.

Headlamp levelling

The load in the car changes the vertical alignment of the headlamp beam, which could dazzle oncoming motorists. Avoid this by adjusting the height of the beam.

- Turn the ignition key to position **II**.
- Turn the headlamp control (1) to one of the end positions.
- Roll the control (3) up or down respectively to raise or lower beam alignment.

Cars with Bi-Xenon headlamps[1] have automatic headlamp levelling, so there is no control (3).

Position/parking lamps

Position/parking lamps can be switched on irrespective of ignition key position.

- Turn the headlamp control (2) to the centre position.

When the ignition key is in position **II** the position/parking lamps and number plate lighting are always on.

Headlamps

Automatic dipped beam (certain countries)

Dipped beam comes on automatically when the ignition key is turned to position **II**, except when the headlamp control (1) is in the centre position. If necessary the automatic dipped beam can be deactivated by an authorised Volvo workshop.

Automatic dipped beam, main beam

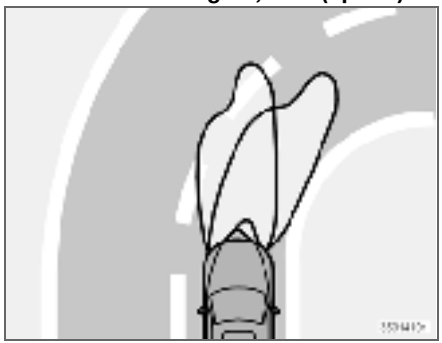
- Turn the ignition key to position **II**.
- Dipped beam is activated by means of turning the headlamp control (1) clockwise to the end position.
- Main beam is activated by means of moving the left-hand stalk switch towards the steering wheel to the end position and releasing it, see page 53.

The lamps are switched off automatically when the ignition key is turned to position **I** or **0**.

[1] Option.

Lighting panel

Active Bi-Xenon Lights, ABL (option)



Headlamp pattern for active/non-active headlamps.

The ABL headlamps' headlamp pattern follows the movements of the steering wheel during driving. The function is activated automatically when the car is started and can be deactivated/activated using the button in the centre console, see page 49.

Fog lamp

NOTE

Regulations for use of fog lamps vary from country to country.

Front fog lamps (option)

The front fog lamps can be switched on along with the headlamps or the position lamps/parking lamps.

– Press the button (2).

The light in the button (2) illuminates when the front fog lamps are switched on.

Rear fog lamp

The rear fog lamp can only be switched on with the headlamps or the front fog lamps.

– Press the button (4).

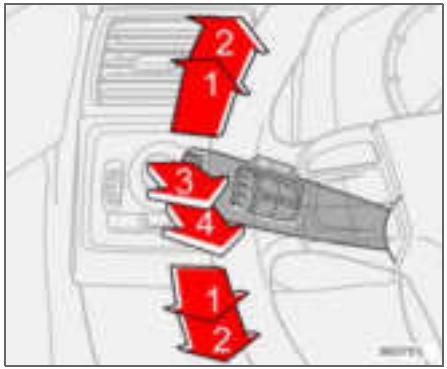
The rear fog lamp indicator symbol on the combined instrument panel and the light in the button (4) illuminate when the rear fog lamp is switched on.

Instrument lighting

The instrument lighting is switched on when the ignition key is in position **II** and the headlamp control (1) is in one of the end positions. The lighting is automatically dimmed during the day and can be controlled manually at night.

Roll the control up or down (5) for brighter or dimmer lighting.

Stalk switch positions



1. Short flash sequence, direction indicators
2. Continuous flash sequence, direction indicators
3. Main beam flash
4. Switching, main and dipped beam, and home safe lighting

Direction indicators

Continuous flash sequence

– Move the stalk switch up or down to end position (2).

The stalk switch remains in its end position and is moved back manually, or automatically by steering wheel movement.

Short flash sequence

– Move the stalk switch up or down to position (1) and release, the stalk switch then returns to its home position, or move the stalk switch to position (2) and move it directly back to the home position.

The direction indicators flash three times. Short flash sequence interrupted immediately if indicating is started in the opposite direction.

Switching, main and dipped beam

The ignition key must be in position **II** for main beam to be switched on.

– Turn the headlamp control clockwise to the end position, see page 51.
– Move the stalk switch towards the steering wheel to the end position (4) and release.

Main beam flash

– Move the stalk switch gently towards the steering wheel to position (3).

Main beam comes on until the stalk switch is released.

Home safe lighting

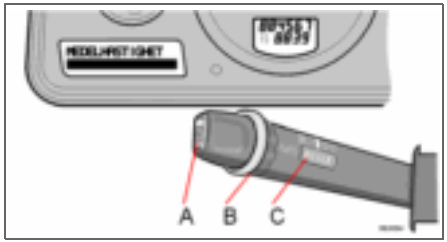
Some exterior lights can be kept lit and serve as home safe lighting after the car is locked. The standard delay is 30 seconds[1], but can be changed to 60 or 90 seconds.

– Remove the key from the ignition switch.
– Move the stalk switch towards the steering wheel to the end position (4) and release.
– Get out of the car and lock the door.

[1] Factory settings.

Left-hand stalk switch

Trip computer (option)



Controls
To scroll through trip computer information, turn the thumbwheel (B) in steps, either upward or downward. Continue turning to return to the starting point.

NOTE

If a warning message interrupts while you are using the trip computer, this message must be acknowledged. Acknowledge by pressing the **READ** button (**A**) and revert to the trip computer function.

Functions
The trip computer displays the following information:

- AVERAGE SPEED
- ACTUAL SPEED MPH[1]
- INSTANTANEOUS
- AVERAGE
- KILOMETRES TO EMPTY TANK
- DSTC, see page 126

Average speed
When the ignition is switched off, the average speed is stored and used as the basis of the new value when you continue driving. Reset using the **RESET** button (C).

Actual speed mph[1]
Current speed is displayed in mph.

Instantaneous
Current fuel consumption is calculated every second. The information on the display is updated every couple of seconds. When the car is stationary, "----" appears on the display. During the period for regeneration[2] fuel consumption may increase, see page 116.

Average
The average fuel consumption since the last reset (**RESET**). The average fuel consumption is stored when the ignition is switched off and remains until the function is reset. Reset using the **RESET** button (C).

[1] Certain countries.

[2] Only applies to diesel cars with particle filter.

NOTE

There may be a slight error in the reading if a fuel-driven heater is used.

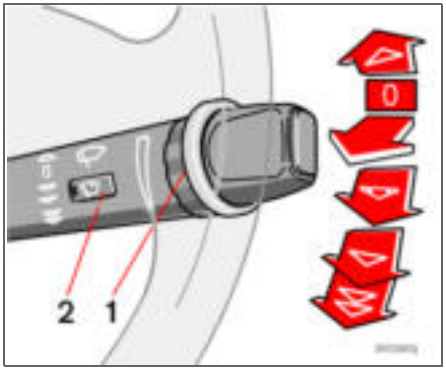
Kilometres to empty tank
The range to empty is calculated based on the average fuel consumption over the last 30 km. When the range to empty is shorter than 20 km then "----" is shown in the display.

NOTE

There may be a slight error in the reading if fuel consumption is changed due to a change in driving style or if a fuel-driven heater is used for example.

Resetting
– Select AVERAGE SPEED or AVERAGE
– Press and hold the **RESET** button (C) for at least five seconds to reset the average speed and average consumption at the same time.

Windscreen wipers



Wiper/washer function – windscreen.

Windscreen wipers off

The windscreen wipers are off when the stalk switch is in position **0**.

Single sweep

Raise the stalk switch to make a single sweep.

Intermittent wiping

The delay between sweeps can be adjusted. Turn the thumbwheel (1) up for a shorter interval between sweeps. Turn it down to increase the delay.

Continuous wiping

The wipers sweep at normal speed.

The wipers sweep at high speed.

IMPORTANT

Use plenty of washer fluid when the wipers are cleaning the windscreen. The windscreen must be wet when the windscreen wipers are operating.

Windscreen/headlamp washers

Pull the stalk switch towards the steering wheel to start the windscreen and headlamp washers. The wipers will make three more sweeps once the stalk is released.

High-pressure headlamp washing (option in certain markets)

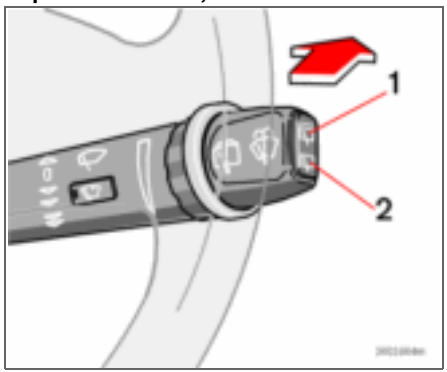
High-pressure headlamp washing consumes a large quantity of washer fluid. To save fluid, the headlamps are only washed every fifth wash cycle (within a ten minute period). When 10 minutes have elapsed following the latest windscreen washing, the headlamps are again washed with high-pressure with the first windscreen washing. Turn the stalk switch toward the steering wheel to wash the windscreen only.

Reduced washing

If only approx. one litre of washer fluid remains in the reservoir, the supply to the headlamps and rear window is cut off in order to prioritise cleaning of the windscreen.

Right-hand stalk switch

Wiper and washer, rear window



Wiper/washer function – rear window.

Press the stalk switch forward to initiate rear window washing and wiping. The control at the end of the stalk has

1. Rear window wiper – intermittent wiping
2. Rear window wiper – normal speed

Wiper – reversing

Engaging reverse gear while the windscreen wipers are on initiates intermittent rear window wiping[1]. If the rear window wiper is already on at normal speed, no change is made.

[1] This function (intermittent wiping when reversing) can be deactivated. Contact an authorised Volvo workshop.

Rain sensor (option)

The rain sensor automatically activates the windscreen wipers based on how much water it detects on the windscreen. The sensitivity of the rain sensor can be adjusted using the thumbwheel (1), see the illustration page 55.

Thumbwheel

Use the thumbwheel to adjust the frequency of sweeps when intermittent wiping is selected, or the sensitivity to rain when the rain sensor is selected.

– Turn the thumbwheel clockwise for higher sensitivity and anticlockwise for lower sensitivity. (An extra sweep is made when the thumbwheel is turned clockwise.)

On/Off

When activating the rain sensor, the ignition key must be in position **I** or **II** and the windscreen wiper stalk switch must be in position **0**.

To activate the rain sensor:

– Press the button (B). A light in the button illuminates to indicate that the rain sensor is active.

To turn the rain sensor off, either:

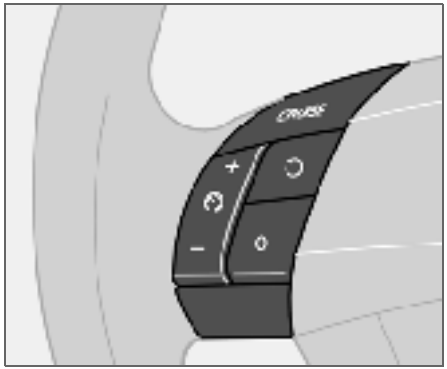
– Press the button (2).
– Press the stalk switch downward to another wiper programme. If the stalk switch is raised, the rain sensor will remain active, the wipers make an extra sweep and then return to rain sensor mode when the stalk switch is released back to position **0**.

The rain sensor is automatically deactivated when the key is removed from the ignition switch or five minutes after the ignition is switched off.

IMPORTANT

In an automatic car wash: Turn off the rain sensor by pressing the button (B) while the ignition key is in position **I** or **II**. Otherwise, the windscreen wipers may start and be damaged.

Activating



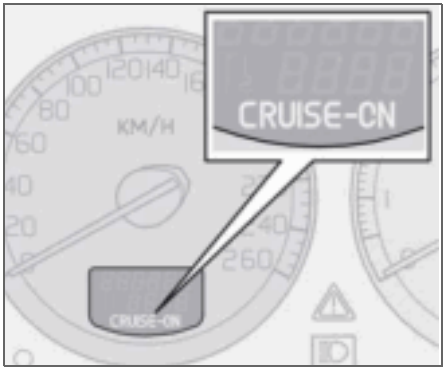
The controls for cruise control are to the left of the steering wheel.

Setting the desired speed:

– Press the **CRUISE** button. CRUISE is shown on the combined instrument panel.
– Touch **+** or **—** to lock the vehicle speed. CRUISE-ON is shown.

Cruise control cannot be engaged at speeds below 30 km/h or above 200 km/h.

Increasing or decreasing speed



– Increase or decrease the locked speed by pressing and holding **+** or **–**. The speed of the car when the button is released is set as the new speed.

Pressing (less than half a second) **+** or **—** changes the speed 1 km/h or 1.6 km/h.

NOTE

A temporary increase in speed (less than one minute) using the accelerator, such as while overtaking, does not affect the cruise control setting. When you release the accelerator, the car will return to the programmed speed.

Temporary disengagement

– Press **0** to disengage the cruise control temporarily. CRUISE will be shown on the combined instrument panel. The speed set earlier is stored in the memory.

The cruise control is also temporarily disengaged when:

- the brake pedal or clutch pedal is depressed
- speed falls below 25–30 km/h when travelling uphill
- the gear selector is moved to position **N**
- wheel spin or wheel lock-up occurs
- a temporary increase in speed lasts longer than one minute.

Return to the set speed



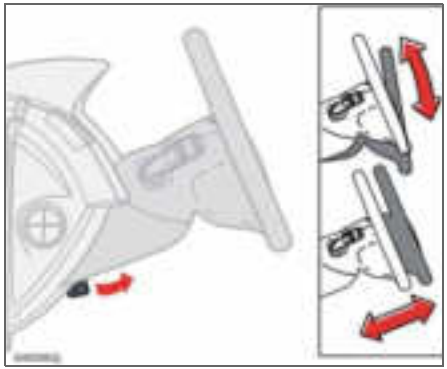
– Press this button to resume the previously set speed. CRUISE-ON appears on the combined instrument panel.

Disengaging

– Press **CRUISE** to disengage the cruise control. CRUISE-ON goes out on the combined instrument panel.

Steering wheel adjustment, hazard warning flashers

Steering wheel adjustment



The steering wheel can be adjusted for both height and reach.

- Pull the lever towards you to release the steering wheel.
- Adjust the steering wheel to the position that suits you best.
- Push back the lever to fix the steering wheel in place. If the lever is stiff, press the steering wheel lightly at the same time as you push the lever back.

WARNING

Adjust the steering wheel before driving off, never while driving. Before driving, check that the steering wheel is fixed in position.

Hazard warning flashers

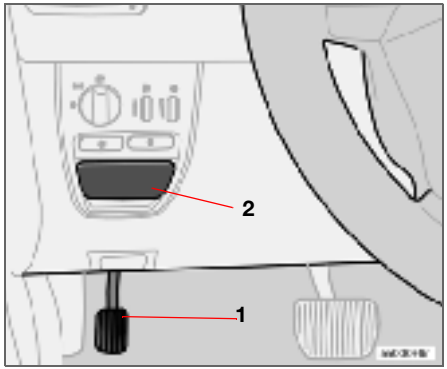


Use the hazard warning flashers (all direction indicators flash) when the car is stopped where it could be a traffic hazard or obstruction. Press the button to activate the function.

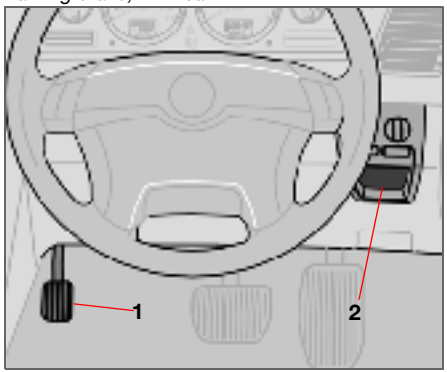
NOTE

Regulations regarding the use of hazard warning flashers vary from country to country.

Parking brake



Parking brake, LHD car.



Parking brake, RHD car.

NOTE

The warning symbol in the combined instrument panel illuminates irrespective of how hard the parking brake pedal is depressed.

How to apply the parking brake

- Press the foot brake down firmly.
- Depress the parking brake pedal (1) firmly as far as possible.
- Release the foot brake and make sure that the car is stationary.
- If the vehicle rolls, the parking brake pedal must be depressed further.
- When parking a vehicle select position **1** (for manual transmission) or **P** (for automatic transmission).

Parking on a hill

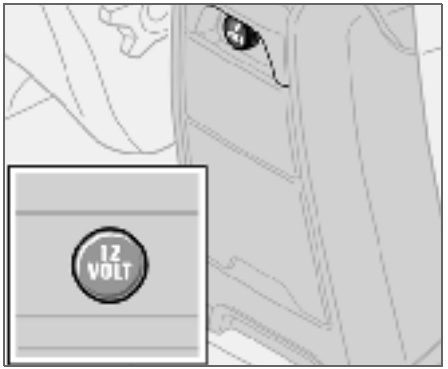
If the car is parked facing uphill; turn the wheels away from the kerb.

If the car is parked facing downhill, turn the wheels towards the kerb.

How to release the parking brake

- Press the foot brake down firmly.
- Pull the handle (2).

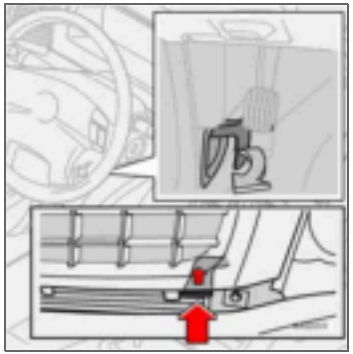
Electrical socket in rear seat



The electrical socket can be used for accessories, such as a mobile phone charger or a cooler, and it is designed for 12 V. The maximum current is 10 A. For the socket to supply current, the ignition key must be in at least position **I**.

Parking brake, electrical socket, bonnet, etc.

Opening the bonnet

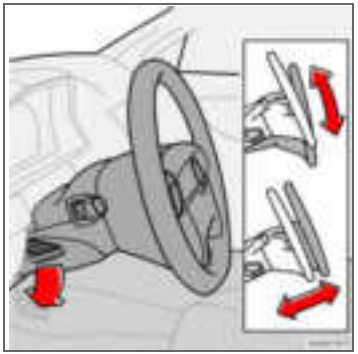


Pull the handle towards you to release the bonnet lock mechanism.

WARNING

Close the bonnet by placing your hand on its top and pressing down. Do not close it by holding the grille. Engine components on the inside could injure your fingers.

Steering wheel adjustment

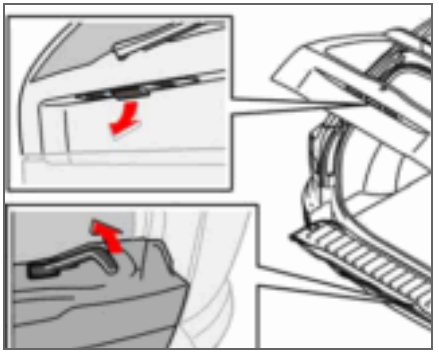


The steering wheel can be adjusted both vertically and front-rear. Press down the control on the left-hand side of the steering column. Then adjust the steering wheel to the position that suits you best. Press the control back into place to lock the steering wheel. If this is difficult, press the steering wheel slightly while pressing the control back.

WARNING

Adjust the steering wheel before driving, never while driving. Ensure that the steering wheel is locked.

Opening the tailgate



Open the tailgate by pulling the handle indicated in the illustration. Fold down the rear flap by lifting the handle up.

Operating

The power windows are operated using the controls in the doors. The ignition key must be in position **I** and **II** for the power windows to operate. The windows continue to work when the car has stopped and ignition key has been removed, provided none of the doors is opened. Operate the windows with caution.

To open a window:

– Depress the front of the control.

To close a window:

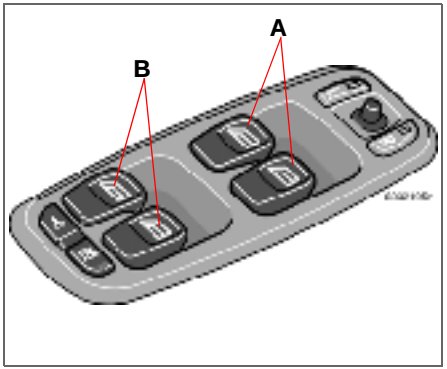
– Raise the front of the control.

WARNING

If there are children in the car:

- Remember to switch off the supply to the power windows by removing the ignition key if the driver leaves the car.
- Make sure that children's and other passengers' hands are clear when closing the windows.
- If the rear door windows are operated from the driver's door:
- Check that none of the rear seat passengers are in danger of getting their hands caught when closing the windows.

Driver's door



The driver can operate both power windows from the driver's seat. The windows can be opened and closed in two ways:

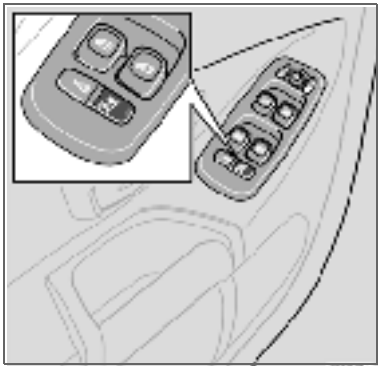
– Press the control (**A**) slightly down or pull it slightly up. The power windows go up or down as long as the switch is actuated.

– Press the control (**A**) all the way down or pull it all the way up, and then release. The windows then open or close automatically. If the window is obstructed by an object, the movement will stop.

NOTE

The function auto up for the passenger side is only available in certain markets.

Blocking power windows in the rear doors



*Controls (**B**) to operate windows in the rear doors.*

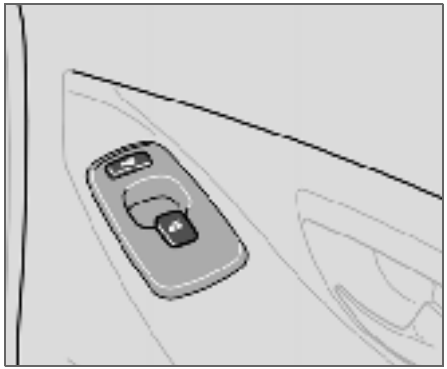
The power windows in the rear seat can be blocked with the switch on the driver's door control panel. Always remember to switch off current to the power windows (i.e. remove the ignition key) if you leave children in the car unattended.

The light in the switch is illuminated
The rear door windows can only be operated from the driver's door.

The light in the switch is extinguished
The rear door windows can be operated both with the controls on each rear door and with the controls on the driver's door.

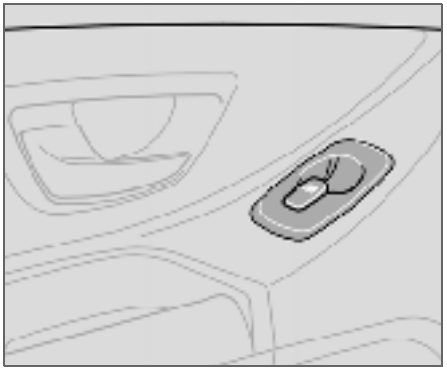
Power windows

Front passenger seat



The control for the power window at the front passenger seat operates that window only.

Rear power windows

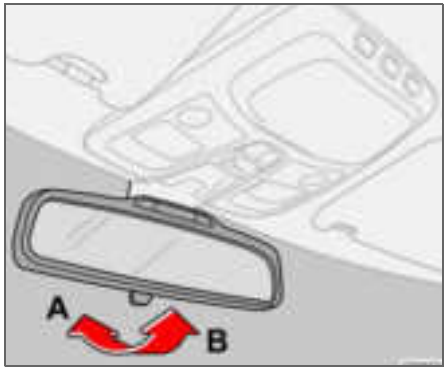


The rear door windows can be operated with the controls on the doors and the switch on the driver's door. If the light in the switch for blocking power windows in the rear doors (located in the driver's door control panel) is illuminated, the rear door windows can only be operated from the driver's door.

WARNING

If rear door windows are being operated from the driver's door, check that no rear seat passenger are in danger of getting pinched when the windows close.

Interior rearview mirror



The illustration is a montage. The mirror has either manual dipping or automatic dimming, never both at the same time.

Bright light from behind could be reflected in the rearview mirror and dazzle the driver. Use dimming when disturbed by light from behind.

Dimming

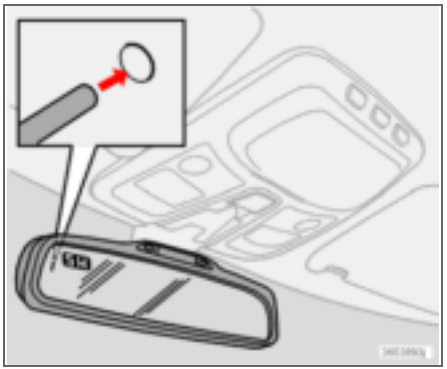
A: Normal position

B: Dimmed position.

Automatic dimming (option)

Bright light from behind is automatically dimmed by the rearview mirror.

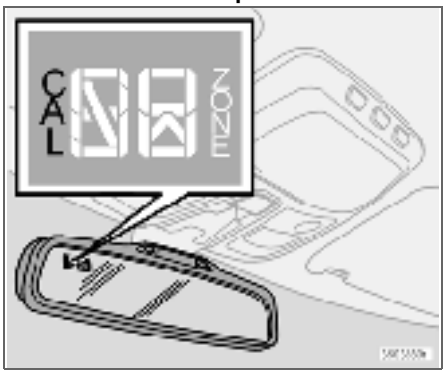
Rearview mirror with compass (option in certain markets)



The upper right-hand corner of the rearview mirror has an integrated display that shows the compass direction in which the front of the car is pointing. Eight different directions are shown with English abbreviations: **N** (north), **NE** (north east), **E** (east), **SE** (south east), **S** (south), **SW** (south west), **W** (west) and **NW** (north west).

If the compass is activated then it starts automatically in ignition position II or when the engine is running. Switch the compass on or off by pressing the button set into the rear of the mirror. Use a straightened paper clip for example. The button is countersunk approximately 2.5 centimetres in the mirror.

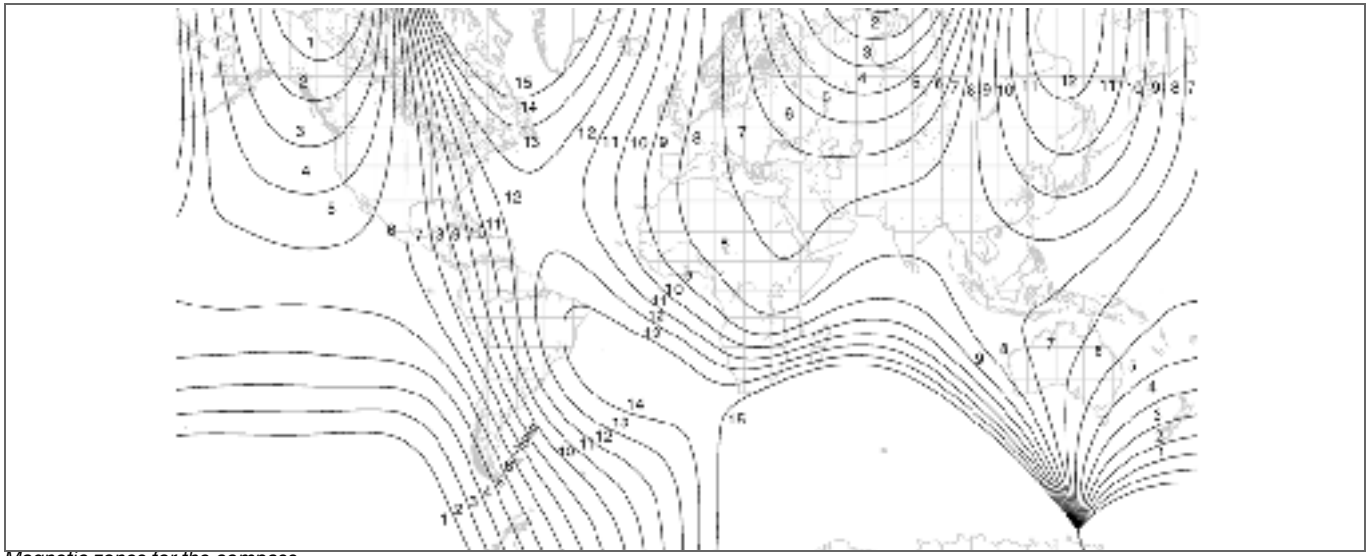
Correct zone on compass



The earth is divided into 15 magnetic zones. The compass is set for the geographical area to which the car was delivered. The compass should be calibrated if the car is moved across several magnetic zones.

- Ignition position **II**.
- Press and hold the button on the rear of the mirror for approximately 3 seconds until ZONE is shown (use a straightened paper clip for example). The number for the current area is shown.
- Press the button several times until the number for the required geographic area (1–15) is shown. After several seconds the display returns to show the compass direction, this means that the change of zone is complete.

Rearview and door mirrors



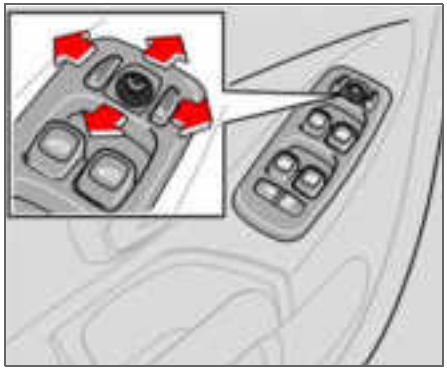
Magnetic zones for the compass

Calibration

The compass may need calibrating to display correctly. For best results, switch off all major power consumers such as interior lighting, ventilation fan, heated rear window etc. and avoid having metal objects and magnetic objects close to the mirror.

- Stop the car in a wide open area with the engine running.
- Press and hold the button on the rear of the mirror (use a paper clip for example) until CAL is shown (approx. 6 seconds).
- Drive slowly in a circle at a speed of no more than 8 km/h until **CAL** disappears from the display, which is when calibration is complete.
- Alternative calibration method: drive off as usual. **CAL** disappears from the display when calibration is complete.

Door mirrors



The controls for adjusting the two door mirrors are at the front of the driver's door armrest. The rearview mirrors can be operated in ignition position **I** and **II**.

– Press the **L** button for the left-hand door mirror or **R** for the right-hand door mirror. The light in the button illuminates.
– Adjust the position with the joystick in the centre.
– Press the **L** or **R** button again. The lamp goes out.

WARNING

Adjust the mirrors before you begin driving.

IMPORTANT

Use the defroster (see page 50) to remove ice from the mirrors, not an ice scraper. The scraper could scratch the mirror glass.

Door mirrors with memory function (option)

If the car has door mirrors with memory function, they work together with the memory setting of the seat, see page 81.

Memory function in the remote control (option)

When you unlock the car with one of the remote controls and change the setting of the door mirrors, these new settings are saved in the remote control. The next time you unlock the car with the same remote control and open the driver's door within five minutes, the mirrors will assume their stored positions.

Laminated side windows (option)

The laminated windows in the front and rear doors improve sound insulation in the passenger compartment and provide better protection against unauthorised entry.

Water and dirt-repellent coating on the front windows and/or door mirrors (option)

The door mirrors are treated with a coating that maintains good rear-view vision despite the rain.



Side windows and mirrors treated with the water and dirt-repellent coating are marked with a small symbol.

Defrost the door mirrors:

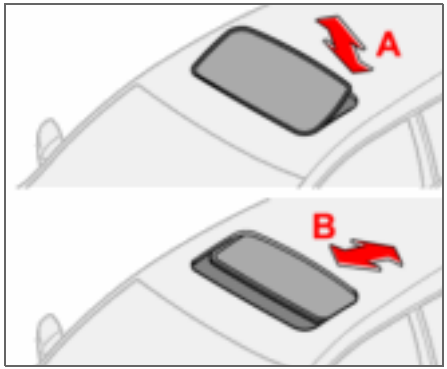
- If they are covered with ice or snow.
- In heavy rain and dirty road conditions.
- If they are misted.

IMPORTANT

Do not use a metal ice scraper to remove ice from the windows. The water and dirt-repellent coating could be damaged. Use the defroster to remove ice from the mirrors!

Power sunroof (option)

Open positions



The sunroof controls are located in the roof panel. The sunroof can be opened to two positions:

A. Ventilation position, up at the rear edge

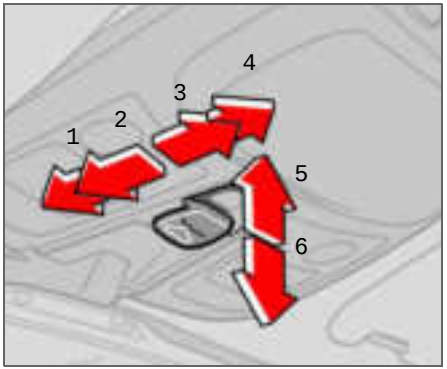
B. Sliding position, backwards/forwards

The ignition key must be in position **I** or **II**.

WARNING

If there are children in the car:

Switch off the supply to the power sunroof by removing the ignition key if the driver leaves the car.



1. Closing, automatic
2. Closing, manual
3. Opening, manual
4. Opening, automatic
5. Opening, ventilation position
6. Closing, ventilation position

Ventilation position

To open:

– Press the rear edge of the control (5) upward.

To close:

– Pull the rear edge of the control (6) downward.

Switch from ventilation position to comfort position; pull the control rearwards to its end position (4) and release.

Automatic operation

Move the control over the resistance point position (3) to the rearmost end position (4) or over the resistance point position (2) to the front end position (1) and release. The sunroof will open to the comfort position or will close completely.

In order to open from comfort position to maximum opening:

– Pull the control to the rear once more to the end position (4) and release.

Manual operation

To open:

– Pull the control rearward to the point of resistance (3). The sunroof moves toward the fully open position as long as the button is held in this position.

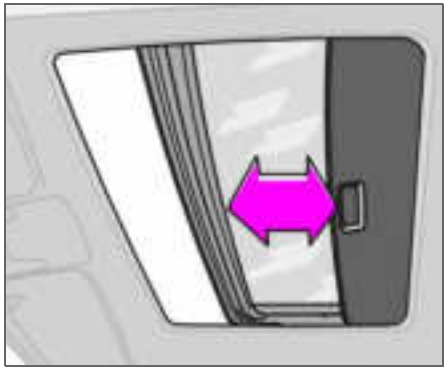
To close:

– Press the control forward to the point of resistance (2). The sunroof moves toward the closed position as long as the button is held in this position.

WARNING

The sunroof's pinch-protection function only operates during automatic closing, not manual.

Sunscreen



The sunroof features a manual, sliding interior sunscreen. The sunscreen slides back automatically when the sunroof is opened. Grip the handle and slide the screen forwards to close it.

Pinch protection

The sunroof's pinch protection function is activated if the hatch is blocked by an object. If blocked, the sunroof will stop and automatically open to the previous position.

WARNING

The sunroof's pinch protection function only operates during automatic closing, not during manual closing.

Make sure children's hands are clear when closing the sunroof.

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Electronic Climate Control, ECC 72
Fuel-driven heater (option) 75

CLIMATE CONTROL



03

General information on climate control

Air conditioning

The climate control system cools or heats, and dehumidifies the air entering the passenger compartment. The car is equipped with electronic climate control (ECC).

NOTE

The air conditioning can be switched off, but to ensure the best possible air in the passenger compartment and prevent the windows from misting, it should always be on.

Misting windows

Reduce the problem of windows misting up on the inside by cleaning the windows. Use a regular window cleaner.

Particle filter

Make sure that the multifilter/particle filter is replaced regularly. Consult an authorised Volvo workshop.

Ice and snow

Remove ice and snow from the climate control system air intake (the grille between the bonnet and the windscreen).

Fault tracing and repair

Entrust fault tracing and repair of the climate control system to an authorised Volvo workshop only.

Refrigerant

The air conditioning system contains R134a refrigerant. This refrigerant contains no chlorine, which means that it is harmless to the ozone layer. The system must only be charged with R134a refrigerant. Have an authorised Volvo workshop carry out this work.

Ventilation fan function

When the engine is off (and if the ignition key is in position **I** or **II**), the ventilation fan is automatically switched off. This is to prevent the battery from becoming discharged.

To activate the ventilation fan, turn the fan control and set the desired speed.

ECC (option)

Actual temperature

The temperature you select corresponds to the physical experience with reference to factors such as air speed, humidity and solar radiation in and around the car.

Sensor location

- The sun sensor is on the top side of the dashboard.
- The temperature sensor for the passenger compartment is behind the climate control panel.

NOTE

Do not cover or block the sensors with clothing or other objects.

Side windows and sunroof

To ensure that the air conditioning works satisfactorily, the side windows, and sunroof if appropriate, should be closed.

Acceleration

The air conditioning system switches off temporarily at full acceleration. You may feel a temporary rise in temperature.

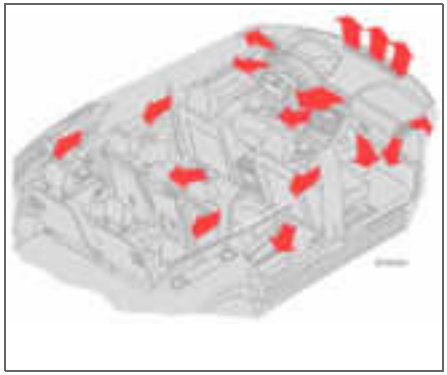
Condensation

In warm weather, condensation from the air conditioning system may drip under the car. This is normal.

Fuel economy

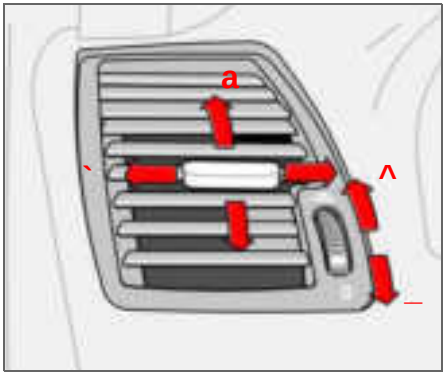
With ECC, the air conditioning system is controlled automatically and is used just enough to cool the passenger compartment and to adequately dehumidify the incoming air. This provides better fuel economy compared to conventional systems where the air conditioning cools the air to just above freezing point.

Air distribution



Incoming air is distributed through several different vents located throughout the car.

Panel vents in the dashboard



A: Open

B: Closed

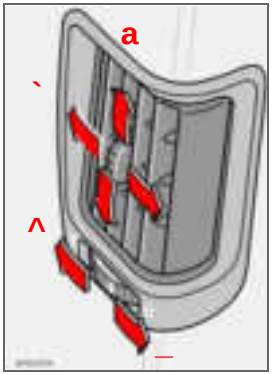
C: Lateral airflow

D: Vertical airflow.

– Aim the outer vents towards the side windows to remove misting from the front side windows.

– In cold climates: close the centre vents for the most comfortable climate and best demisting.

Panel vents in the door pillar



A: Open

B: Closed

C: Lateral airflow

D: Vertical airflow.

– Aim the outer vents toward the rear side windows to remove misting.

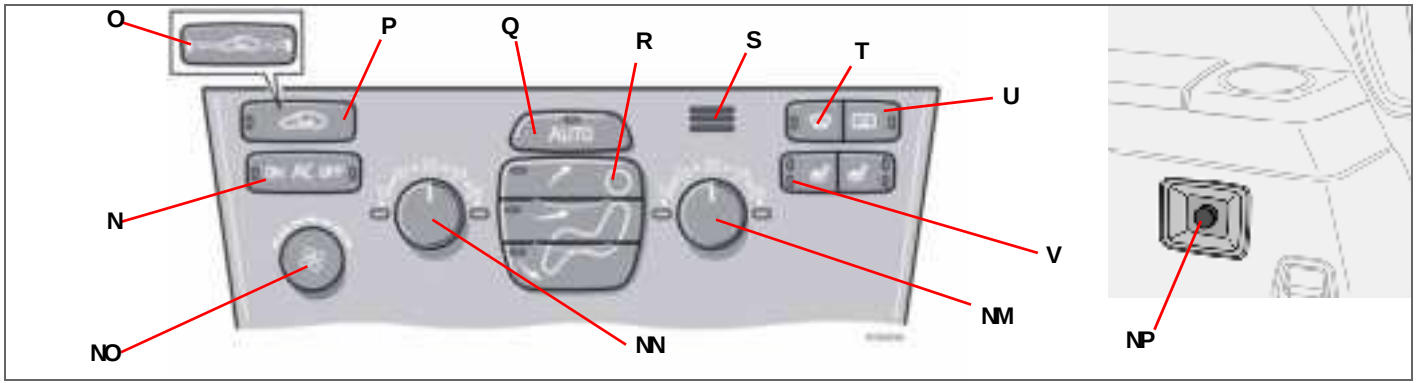
– Aim the vents inwards for a comfortable climate in the rear seat.

Bear in mind that small children can be sensitive to airflow and draughts.

The timer function is activated each time you press .

Electronic Climate Control, ECC

Control panel



1. **AC** – On/Off
2. Recirculation/Multifilter with sensor
3. Recirculation
4. **AUTO**
5. Air distribution
6. Passenger compartment temperature sensor
7. Defroster, windscreen and side windows
8. Rear window and door mirror defroster
9. Heated front seats
10. Temperature, right-hand side
11. Temperature, left-hand side
12. Fan
13. Fan, rear passenger compartment (option in cars seating seven)

Functions

1. AC – ON/OFF

ON: Air conditioning is on. It is controlled by the system's AUTO function. This way, incoming air is cooled and dehumidified.

OFF: Off.

When the defroster function is activated the air conditioning is automatically switched on (can be switched off with the A/C button).

2. Air quality system, recirculation/ multifilter (option certain markets)

Certain cars are equipped with a "Multifilter" and air quality sensor. The Multifilter separates gases and particles, thus reducing the volume of odours and pollutants. The air quality sensor detects increased levels of contaminants in the outside air. When the air quality sensor detects contaminated outside air, the air intake is closed and the air in the

passenger compartment is recirculated. The Multifilter also cleans the air recirculating in the passenger compartment.

When the air quality sensor is active, the green AUT LED illuminates in  .

Operation:

Press  to activate the air quality sensor (normal setting).

Or:

– Select one of the following three functions by repeatedly pressing  .

- **MAN** LED lit: Recirculation is now activated.
- No LED lit: Recirculation is not activated unless needed to cool in a warm climate.
- **AUT** LED lit: The air quality sensor is now activated.

Keep the following in mind:

- Make it a rule to have the air quality sensor activated at all times.
- Recirculation is limited in cold weather to avoid misting.
- If misting occurs, you should deactivate the air quality sensor.
- If misting occurs, you can use the defroster functions for the windscreen, side windows and rear window.
- Follow the Volvo service programme for the recommended replacement interval of the Multifilter. If the car is used in environments where more contaminants are present, it may be necessary to change the Multifilter more often.

3. Recirculation

Recirculation can be used to shut out bad air, exhaust, etc. from the passenger compartment. The air in the passenger compartment is then recirculated, i.e. no air from outside the car is taken into the car when this function is activated.

If you allow the air in the car to recirculate, there is a risk of icing and misting, especially in winter.

The timer function (cars with Multifilter and air quality sensor have no timer function) minimises the risk for ice, misting and bad air.

Activate the function as follows:

– Press  for more than 3 seconds. The LED flashes for 5 seconds. The air recirculates in the car for 3–12 minutes depending on the outside temperature.

– The timer function is activated each time you press  .

To switch off the timer function:

– Press  again for more than 3 seconds. The LED illuminates for 5 seconds to confirm your selection.

4. AUTO

AUTO function automatically regulates climate control so that the desired temperature is attained. The automatic function controls heating, air conditioning, air quality sensor, fan speed, recirculation, and air distribution. When one or more functions are selected manually, the other functions continue operating automatically. All manual settings are switched off when **AUTO** is pressed.

5. Air distribution

- When the top button is depressed, air is directed to the windows.
- When the centre button is depressed, air is directed to the head and body.
- When the lower button is depressed, air is directed to the legs and feet.

Press **AUTO** to return to automatic air distribution.

6. Passenger compartment temperature sensor

The passenger compartment temperature sensor monitors the temperature inside the car.

Electronic Climate Control, ECC

7. Defroster, windscreen and side windows

Used to quickly remove misting and ice from the windscreen and side windows. Air flows to the windows at high speed. The light in the defroster button illuminates when this function is engaged.

When the function is selected the following also takes place to provide maximum dehumidification of the air in the passenger compartment:

- the air conditioning (**AC**) is automatically engaged (can be switched off with the A/C button).
- recirculation is automatically disengaged.

When the defroster function  is switched off the climate control system returns to the previous settings.

8. Rear window and door mirror defrosters

Use this button to quickly remove misting and ice from the rear window and door mirrors, see page 50 for further information about this function.

9. Heated front seats

To activate front seat heating:

– Higher heat:
Press the button once – both lights illuminate.

– Lower heat:
Press the button twice, one – light illuminates.

Heat off:
Press the button three times – light not illuminated.

An authorised Volvo workshop can adjust the temperature.

10 and 11. Temperature selector

The two knobs can be used to set the temperature for the passenger and driver's sides of the car.

NOTE

Heating or cooling cannot be hastened by selecting a higher or lower temperature than the actual desired temperature.

12. Fan

Increase or decrease fan speed by turning the knob. The fan speed is regulated automatically if **AUTO** is selected, and the previously set fan speed is disengaged.

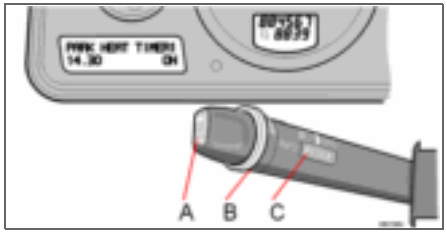
NOTE

If the knob is turned anticlockwise and the fan indicator in the display goes out, the fan and the air conditioning are switched off.

13. Fan, rear passenger compartment (option in cars seating seven)

Fan speed can be increased or decreased by turning the knob. This only applies if **AC** is selected for both front (1) and rear passenger compartment. The button for rear passenger compartment is in the centre console switch panel, see page 48.

General information about heaters



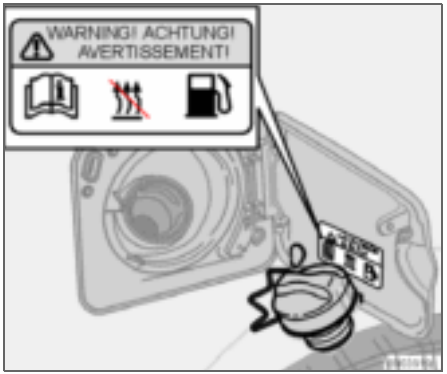
The electrical system must be "awakened" before the parking heater can be programmed.

This is done by:

- pressing the READ button or
- activating main beam or
- turning on the ignition.

The parking heater can be started immediately or set with two different start times using **TIMER 1** and **TIMER 2**. Here, start time refers to the time the car is heated and ready. The car's electronic system calculates when heating should be started based on the outside temperature. The heater is not run if the outside temperature exceeds 25 °C. At –10 °C and below, the maximum running time of the parking heater is 60 minutes.

If the parking heater does not start despite repeated attempts, a message is shown in the display. You are recommended to contact an authorised Volvo workshop.



Warning decal on fuel filler flap.

WARNING

The car must be outdoors when the parking heater is used.

Switch off the parking heater before refuelling. Spilled fuel could be ignited.

Check in the information display that the parking heater is off. (When the additional heater is running, PARK HEAT ON is shown in the display.)

Messages in the display

Once the settings for **TIMER 1, TIMER 2** and Direct Start are activated, the amber warning symbol in the combined instrument panel illuminates and explanatory text is shown in the display.

When you leave the car, you will receive a message regarding the current settings of the system.

Parking on a hill

If you park your car on a steep incline, the front of the car should be facing down the slope to ensure the supply of fuel to the parking heater.

Clock/timer

If the car clock is reset after the heater timers are programmed, the selected times will be cancelled.

Setting the TIMER

For safety reasons, you can only programme times for the following 24 hours, not several days in advance.

– Use the thumbwheel (B) to toggle to **TIMER**.

– Briefly press **RESET** (C) so that the hours setting starts to flash.

Fuel-driven heater (option)

– Scroll with the thumbwheel to the desired hour.
– Touch **RESET** to move to the flashing minutes setting.
– Scroll with the thumbwheel to the desired minute.
– Touch **RESET** to confirm the setting.
– Press **RESET** to activate the timer.

Deactivating timer-started parking heater

Proceed as follows to manually switch off the parking heater before the set time has elapsed:

Press the **READ** button (A).

Use the ring (B) to toggle to **PARK HEAT TIMER 1** or **2**. The text **ON** flashes.

Press the **RESET** button (C). The text **OFF** is shown with a constant glow and the parking heater is switched off.

Direct start

– Use the thumbwheel (B) to scroll to **DIRECT START**.
– Press **RESET** (C) to access the options **ON** and **OFF**.
– Select **ON**.

The heater will now run for 60 minutes. Heating of the passenger compartment will begin as soon as the engine coolant has reached a temperature of 30 °C.

Immediate stop of heater

– Use the thumbwheel (B) to scroll to **DIRECT START**.
– Press **RESET** (C) to access the options **ON** and **OFF**.
– Select **OFF**.

NOTE

The car can be started and driven while the parking heater is still running.

Battery and fuel

If the battery has insufficient charge or the fuel level is too low, the parking heater will be switched off automatically. A message appears on the information display. Acknowledge the message by pressing **READ** (A) once.

IMPORTANT

Repeated use of the parking heater combined with short journeys may discharge the battery and impair starting. If the heater is used regularly, the car must be driven for the same time as the heater is used in order to ensure that the alternator has time to charge the battery.

Additional heater[1] (diesel)

Extra heat from the additional heater may be required in cold weather to reach the correct temperature in the passenger compartment.

The additional heater starts automatically when extra heat is required if the engine is running. It is switched off automatically when the correct temperature is reached or when the engine is switched off.

[1] Certain countries

Front seats 80
Interior lighting 82
Storage spaces in the passenger compartment 84
Rear seat 89
Cargo area 91

INTERIOR



04

Front seats

Seating position



The driver's and passenger seats can be adjusted to the optimum sitting and driving positions.

1. Forward/backward: lift the handle to adjust the distance to the steering wheel and pedals. Check that the seat is locked after changing position.
2. Raise/lower the front of the seat cushion, pump up/down, (option on passenger side)
3. Raise/lower the seat, pump up/down, (option on passenger side)
4. Lumbar support[1], turn the wheel.
5. Backrest rake: turn the wheel.
6. Control panel for power seat (option).

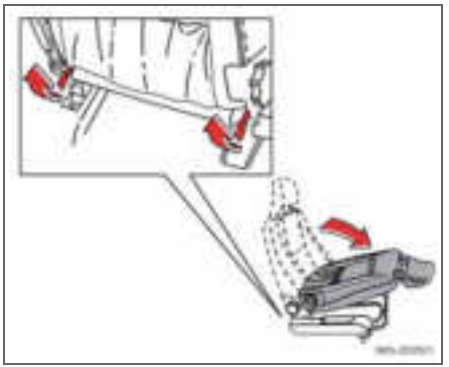
[1] Also applies to power seat.

WARNING

Adjust the position of the driver's seat before setting off, never while driving.

Check that the seat is locked in position.

Lowering the front seat backrest (option)



The passenger seat backrest can be folded forward to make room for long loads.

– Move the seat as far back as possible.
– Adjust the backrest to an upright position 90 degrees.
– Lift the catches on the rear of the backrest while folding it forwards.
– Slide the seat forward so that the head restraint is "locked in place" under the glovebox.

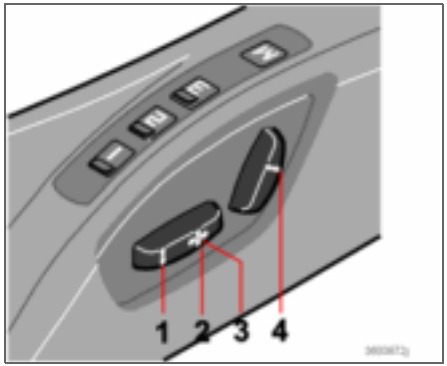
Floor mats (option)

Volvo supplies floor mats especially produced for your car.

WARNING

The floor mat at the driver's seat must be firmly fitted and secured in the attachment clips to prevent it from being trapped around and under the pedals.

Power seat (option)

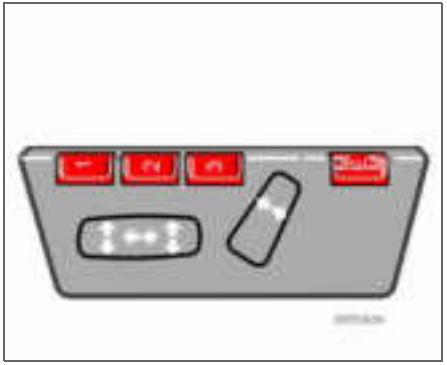


The seats can be adjusted for a certain time after unlocking the door with the remote control without the key being inserted into the ignition switch. The seat can always be set in ignition position **I** or **II**.

1. Front edge of seat cushion up/down
2. Seat forward/rearward
3. Seat up/down
4. Backrest rake

Overload protection is deployed if any seat is blocked. If this occurs, switch off the ignition and wait a short time before operating the seat again. Only one of the seat's settings can be adjusted at a time.

Memory function



Buttons for memory function

Store setting

– Adjust seat.
– Press and hold button **MEM** while pressing button **1**, **2** or **3** at the same time.

Using a stored setting

Press one of the memory buttons **1** – **3** until the seat stops. If you release the button then the movement of the seat will stop.

Key memory in remote control key

The driver's seat positions are stored in the key memory when the car has been locked with the remote control key. When the car is unlocked with the same remote control key the driver's seat and rearview mirrors adopt the stored positions when the driver's door is opened.

NOTE

The key memory is independent of the seat memory.

Emergency stop

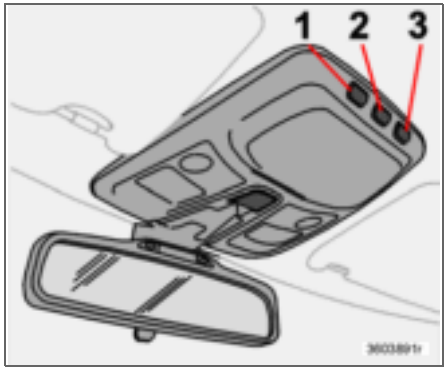
If the seat accidentally begins to move, press any of the buttons to stop the function.

WARNING

Risk of crushing. Make sure that children do not play with the controls.
Check that there are no objects in front of, behind or under the seat during adjustment.
Ensure that none of the rear seat passengers can be trapped.

Interior lighting

Reading lamps and interior lighting



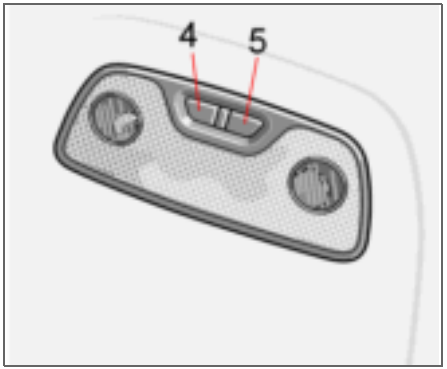
Passenger compartment lighting and reading lamps.

1. Reading lamp left-hand front
2. General interior lighting
3. Reading lamp right-hand front

Switch (2) has three positions for the interior lighting:

The front reading lamps are switched on and off using button (1) or (3).

The general interior lighting is switched on and off with a short press on button (2).



Rear reading lamps

4. Reading lamp left-hand rear, On/Off
5. Reading lamp right-hand rear, On/Off

Automatic lighting

All reading lamps and general interior lighting are switched off automatically after 10 minutes from when the engine is switched off. Each type of lighting can be switched off manually before this.

The general interior lighting is switched on automatically[1] and remains on for 30 seconds when:

[1] The function is light-dependent and is only activated when it is dark.

- the car is unlocked from the outside using the key or remote control
- the engine is switched off and the key is turned to the **0** position.

The general interior lighting is switched on and remains on for 10 minutes when:

- one of the doors is open if the general interior lighting is not switched off.

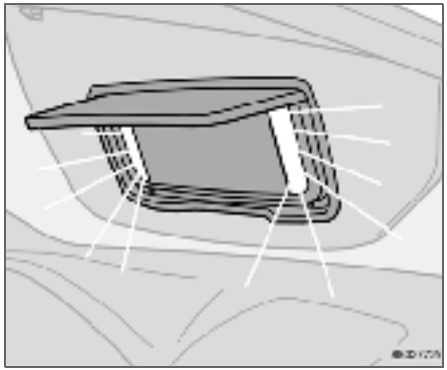
General lighting switches off:

- the engine is started
- when the car is locked from the outside using the key or remote control.

Automatic lighting can be disengaged by pressing and holding button (2) for more than 3 seconds. A short press on the button re-engages automatic lighting.

The programmed times, 30 seconds and 10 minutes, can be changed by a Volvo workshop.

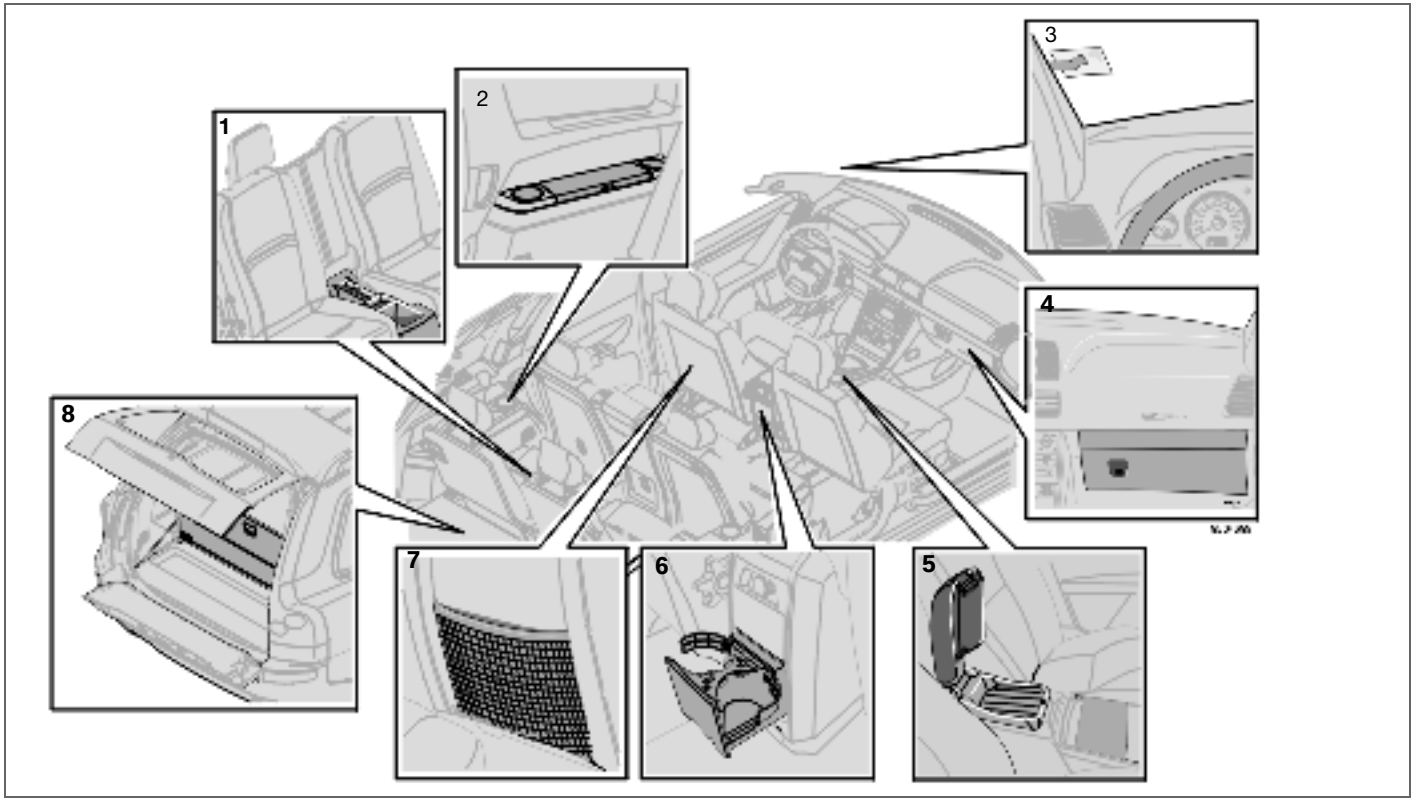
Vanity mirror[1]



The light illuminates automatically when the cover is lifted.

[1] Option in certain markets.

Storage spaces in the passenger compartment



Storage spaces

1. Storage compartment in third row of seats.
2. Storage compartment and cup holder.
3. Ticket clip.
4. Glovebox.
5. Storage tray in centre console.
6. Cup holder for rear seat passengers.
7. Storage pocket (also on the front edge of the front seat cushions).
8. Grocery bag holder.

WARNING

Ensure that no hard, sharp or heavy objects lie or protrude in such a way that they could cause injury during heavy braking.

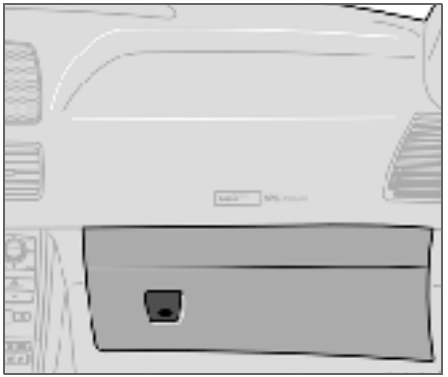
Always secure large and heavy objects with a seatbelt or cargo retaining straps.

Pen holder



The centre console contains a pen holder.

Glovebox



The glovebox can be used to store things such as the owner's manual, maps, pens and petrol cards.

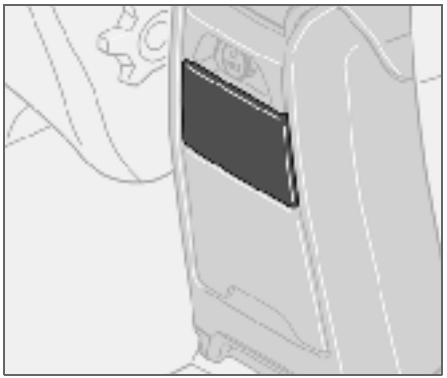
Storage spaces in the passenger compartment

Coat hanger



The coat hanger is only intended for light garments.

Ashtray for rear seat passengers (option)

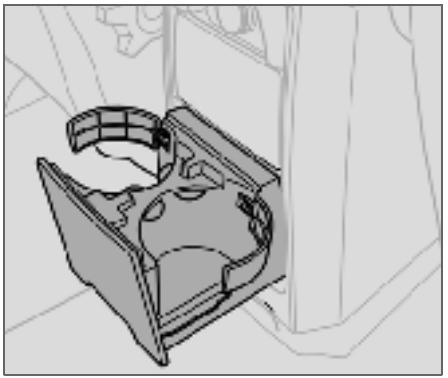


Open the ashtray by pulling the top edge outward.

To empty:

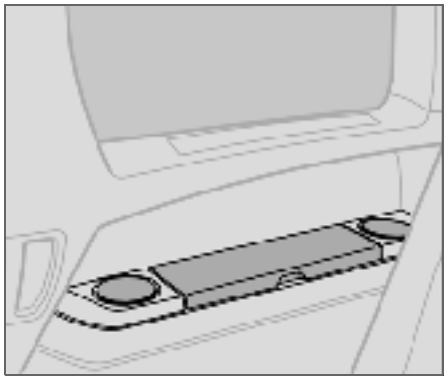
- Open the ashtray.
- Press the cover outwards and tip it back.
- Then lift it out.

Cup holder/bottle holder for rear seat passengers



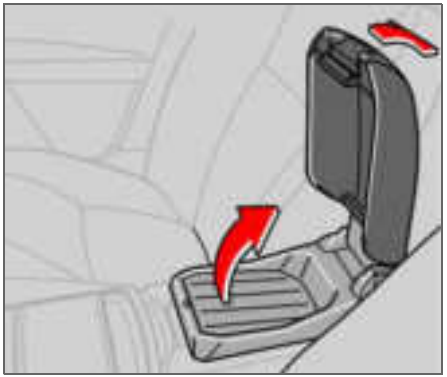
Pull the bottom edge of the insert to open. The cup holder insert can be removed: Detach the two clips so the holder can be used for large bottles.

Storage compartment and cup holder (cars seating seven)



This storage compartment can be used for CDs, books and the like.

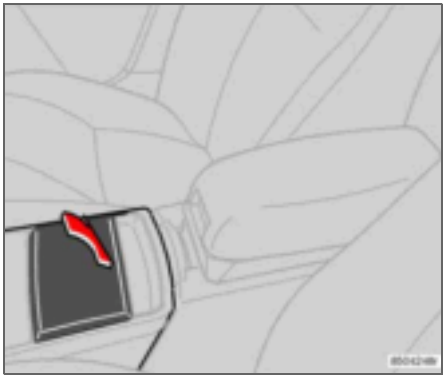
Storage tray in centre console



The centre console contains a storage tray for food and drinks, for example. The armrest can be folded back to make a "table" for rear seat passengers.

Under the storage tray is a storage compartment, e.g. for CD discs.

Cup holder



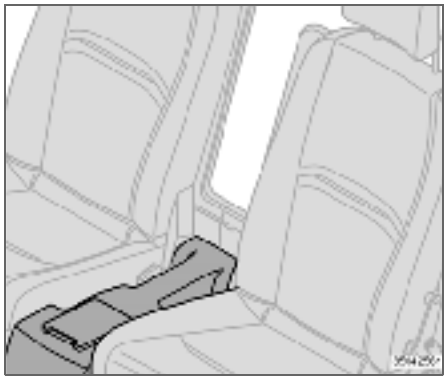
Cup holder for front seat passengers.

Ashtray (option)

– Pull out the insert to empty the astray.

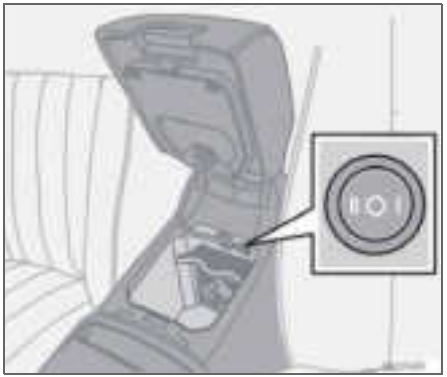
Storage spaces in the passenger compartment

Storage compartment in the third row of seats (cars seating seven)



This storage compartment can be used for pens and other small items.

Refrigerator compartment (option)

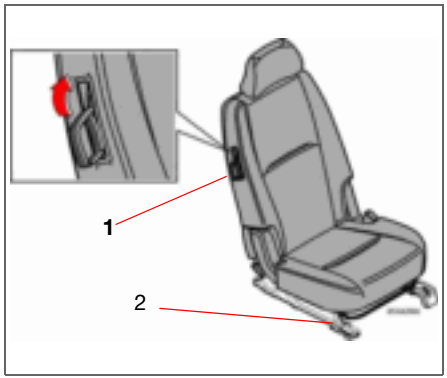


Under front seat's folding armrest there is a refrigerator. It is activated in key position **II**. The refrigerator holds approx. 14 litres and can cool down to approx. 5 °C/41 °F.

WARNING

Make sure that bottles are stored in the refrigerator while driving and that the door is firmly closed.

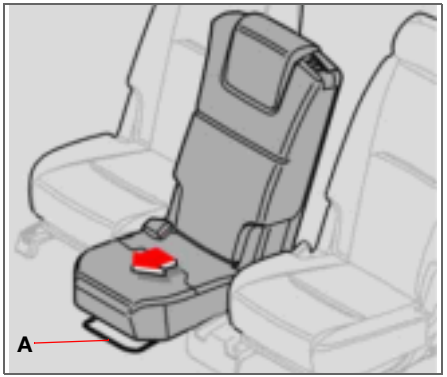
Rear seats – second row (cars seating seven)



Lowering the backrest for entry into the car
Lift the handle (1) up while pushing the seat forward. Do the reverse to return the seat to its original position.

Adjusting the seat front - rear
Lift the bracket (2) to move the seat forwards or backwards.

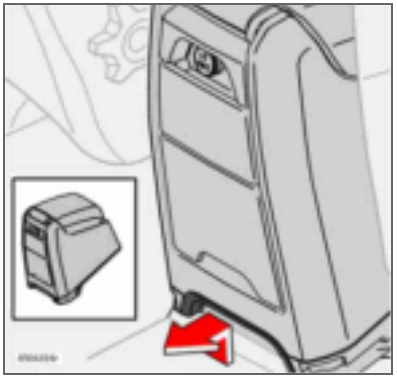
Sliding seat (cars seating seven)



The centre seat in the second row can be slid farther forward than the other seats. Sliding the seat completely forward improves contact between a child sitting on the integrated booster cushion and front seat occupants.

Lift the bracket (A) to move the seat forwards or backwards.

Sliding seat (cars seating seven)

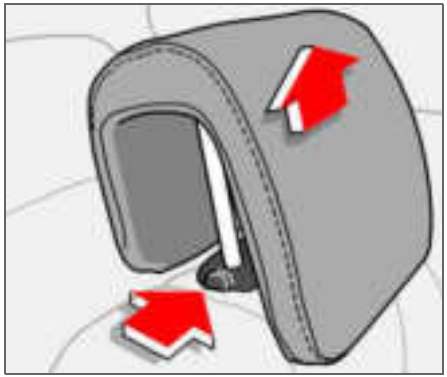


The centre console must first be removed if you wish to slide the centre seat in the second row forward.

- Remove the rear section of the centre console by pulling the catch straight out as illustrated above.
- Then lift the console out of the way.

Rear seat

Head restraint, rear seat – centre seat



The centre seat head restraint can be adjusted to four different heights. Slide the head restraint up as desired.

– Press in the release button to lower it. See illustration!

WARNING

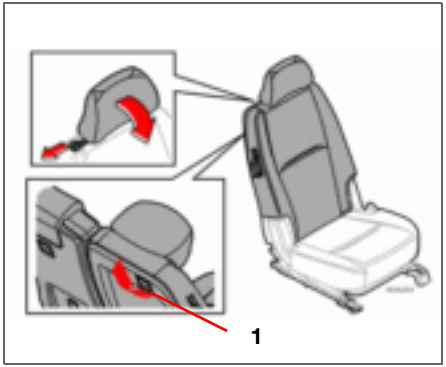
The lowest position should only be used when the backrest is to be folded down or when no one is sitting in this seat.

After raising the backrests in the second and third row, it is important to make sure that the backrests have locked into position. Otherwise the protective system of the seats may be compromised.

NOTE

The head restraint cannot be removed completely!

Extending the cargo area – second row of seats

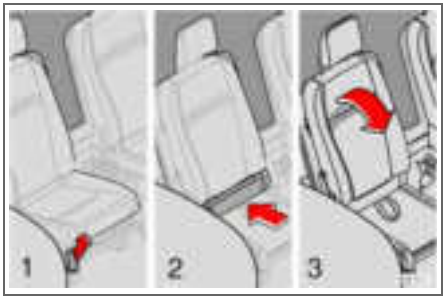


– Set the seats in their rearmost positions (applies only to cars seating seven).
– Lower the head restraint.
– Release the catch (1) and fold down the backrest. Press down to lock the backrest in its folded position.

WARNING

For reasons of safety, no passengers should sit in the third row of seats if the outer head restraints in the second row are lowered.

Extending the cargo area – third row of seats (cars seating seven)



Push the second row of seats to its front position, see page 85.

– Lift the handle upward.
– Slide the seat cushion to its rearmost position. Fold in the right and left-hand cargo eyes in order to avoid damage when lowering the backrest.
– Fold down the backrest (The head restraint folds in automatically when the backrest is folded).

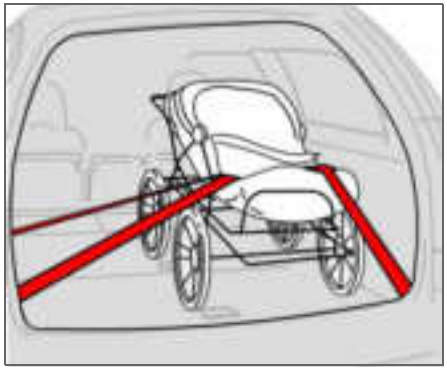
Repositioning the third row of seats

– Raise the backrest to its normal position.
– Take hold of the eyes and pull out the seat cushion until you hear a click.
– Raise the head restraint.

The seat is now ready for use.

Cargo area

General



Payload depends on the car's total kerb weight, including any accessories that are mounted. Kerb weight includes the driver, the weight of the fuel tank when filled to 90% and various fluids, such as washer fluid and coolant. Mounted accessories, i.e. towbar, load carriers, space box, etc., are included in the kerb weight.

The load capacity of the car is reduced by the number of passengers and their weight.

Loading the cargo area

The seatbelts and airbags provide the driver and passengers substantial protection, especially in head-on collisions. However, you must also remember to protect yourself against injuries from behind. When loading cargo, bear in mind that improperly secured or incorrectly loaded objects in the cargo area could be thrown forward with great speed and force in the event of a collision or sudden braking, causing serious injuries.

Bear in mind that if an object weighing 20 kg is subjected to a head-on collision at a speed of 50 km/h, its impact weight will be 1000 kg.

Think about the following when loading:

- Do not load extremely heavy objects up by the front seats. The lowered backrest will be pressed down unnecessarily hard.
- Place the load by the backrest.
- Position heavy loads as low as possible.
- Position wide loads on each side of the division in the backrest.
- Cover sharp edges with something soft.
- Secure the load with retaining straps using the car's lashing eyes.
- Never load above the backrest without a load net.

WARNING

The driving characteristics of the car change based on the car's kerb weight and how heavily it is loaded.

WARNING

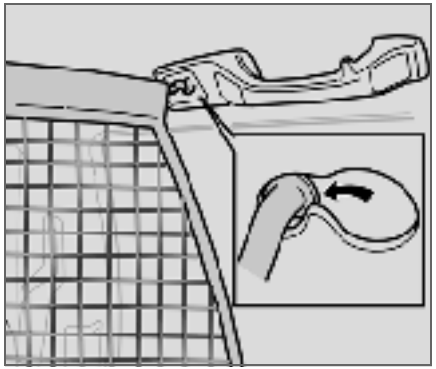
Never load cargo above the backrests! If you do so, the load could be thrown forward in the event of sudden braking or a collision and severely injure you or your passengers. Remember to always secure (bind) the load properly.

If the rear seat backrest is lowered, do not load the car higher than 50 mm under the top edge of the rear passenger windows. Leave 10 cm of free space from the windows inwards. Otherwise, the intended protection of the inflatable curtain, which is hidden in the headlining, may be compromised.

Always secure the load. During heavy braking the load may otherwise shift, causing personal injury.

Turn off the engine and apply the parking brake when loading or unloading long objects! You may accidentally knock the gear lever or gear selector with the load and cause a gear to engage and the car to move off.

Safety net

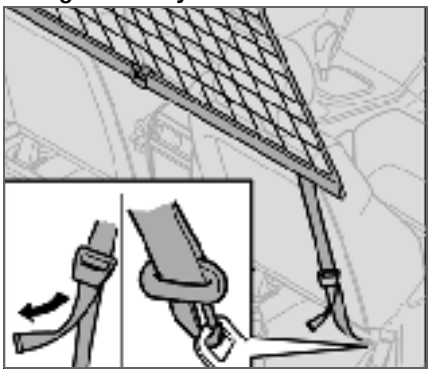


The safety net prevents luggage and cargo from being thrown forward in the passenger compartment during heavy braking.

The net is made of a strong nylon fabric and can be secured two different ways:

- Behind the rear seat backrest
- Behind the front seats if the rear seat is lowered.

Fitting the safety net



If the car is equipped with a cargo area cover, remove it before fitting the safety net.

– Hook the upper rod in the front or rear roof mounting.

– Hook the other end of the rod in the roof mounting on the other side.

– Secure the safety net anchoring straps in the eyes on the floor if the net is secured in the rear roof mountings.

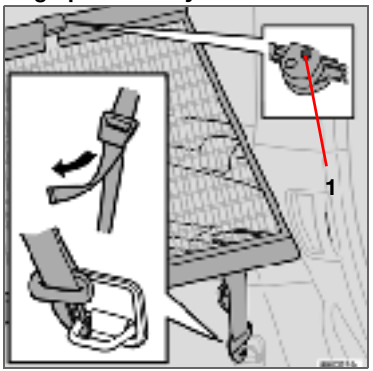
– Use the eyes in the seat slide rail if the net is secured in the front roof mountings.

Only applies to cars seating seven:

– Make sure the net lies in front of the side panel armrest when securing.

– Tension the safety net using the anchoring straps.

Folding up the safety net



The safety net can be folded up and placed in the cargo area floor (for cars seating five).

Press the buttons (1) in the safety net hinges to release the hinges and fold up the net.

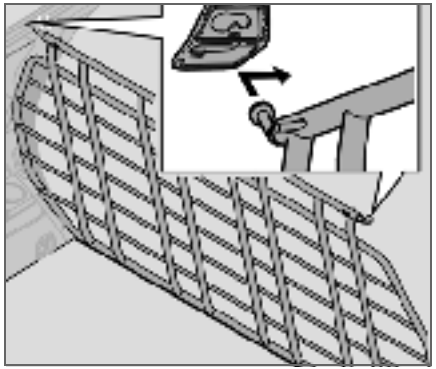
WARNING

Make sure that the upper mountings of the safety net are correctly fitted and that the anchoring straps are securely fastened.

Do not use a damaged net.

Cargo area

Steel safety grille (option)

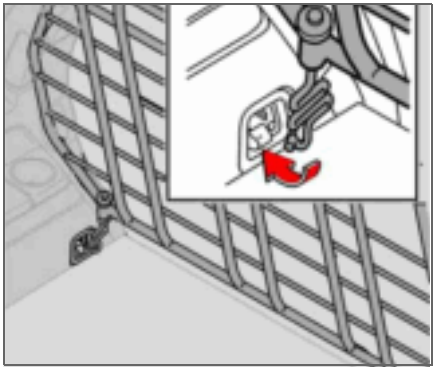


The protective grille in the cargo area prevents cargo or pets from being thrown forward in the passenger compartment in the event of heavy braking.

For reasons of safety, the protective grille must always be mounted and secured correctly.

Fit the protective grille as follows:

- Lift in the protective grille through the tailgate opening or one of the rear doorways (fold down the seats in the second row if necessary).
- Insert one of the protective grille mountings in its bracket above the rear door behind the second row of seats.

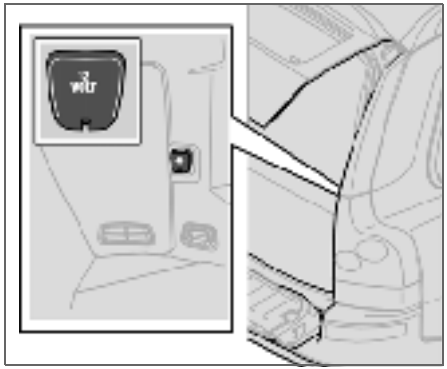


- Slide the protective grille mounting to the front position of the bracket.
- Place the other protective grille mounting in its bracket above the other rear door and slide it to the front position.
- Insert the attaching brace through the lower mounting in the protective grille from underneath, as indicated in the illustration.
- Fit the spring on the attaching brace and screw in the knob.
- Fit the attaching brace hook in load securing eyelet and tighten the knob until the attaching brace takes hold in the load securing eyelet.
- Do the same on the other side.
- Tighten both attaching braces alternately.
- Fit protective caps on the exposed screw threads above the knobs.

WARNING

For cars seating seven: For reasons of safety, no passengers should sit in the third row of seats if the protective grille is positioned behind the second row of seats.

Electric socket in the cargo area



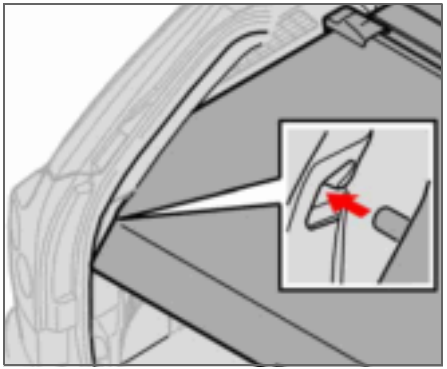
Slide down the cover when you wish to use the socket. It works regardless of whether the ignition is on or off.

If the ignition is switched off and a power consumer that uses more than 0.1 A is connected to the electric socket, a warning message is shown in the display.

NOTE

Do not use the electric socket with the ignition switched off as there is a risk of the battery becoming discharged.

Cargo cover (option)



Pull out the cargo area cover, pull it over the cargo and hook it into the holes in the rear pillars of the cargo area.

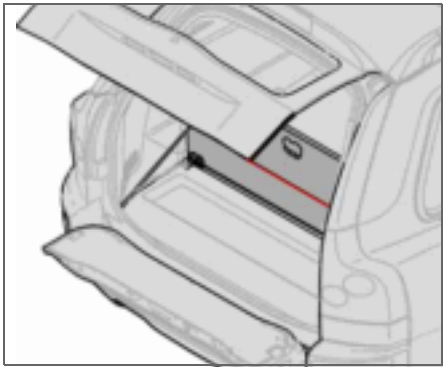
Removing the cargo area cover

Press the end pieces of the cargo area cover inwards, pull up and release. When fitting, press the end pieces of the cargo area cover down into the holders.

WARNING

Do not place objects on the cargo area cover. They could injure passengers during braking or evasive manoeuvres.

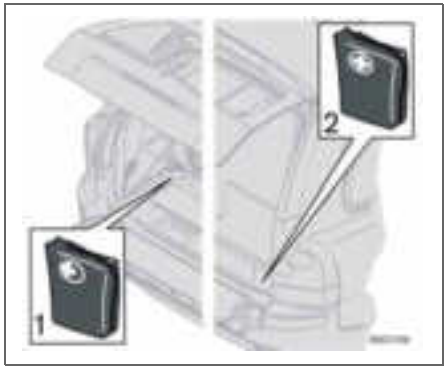
Grocery bag holder



Open the tailgate. Hang or secure your grocery bags using the tensioning straps or holders.

Cargo area

Cargo area compartment, contents



1. Cars seating five 2. Cars seating seven

The following is housed in the floor compartment:

- Warning triangle (certain markets)
- Tool kit
- First-aid kit (certain markets)
- Jack (alternative location)

NOTE

Some components of the first-aid kit have an expiration date and should be replaced before this date.

Opening the compartment in the cargo area floor (cars seating five)

– Lift up the cover in the cargo area floor.

If the car is equipped with a carrier bag holder:

– Lift the cover, detach the tensioning straps to the grocery bag holder.

Opening the compartment in the cargo area floor (cars seating seven)

– Lift up the cover.

If the car is equipped with a carrier bag holder:

– Open the upper cover, detach the tensioning straps to the grocery bag holder, if fitted, and open the lower cover.

IMPORTANT

Remember not to put anything in the area that the cushions fold into. The cushions and seat mechanisms could be damaged.

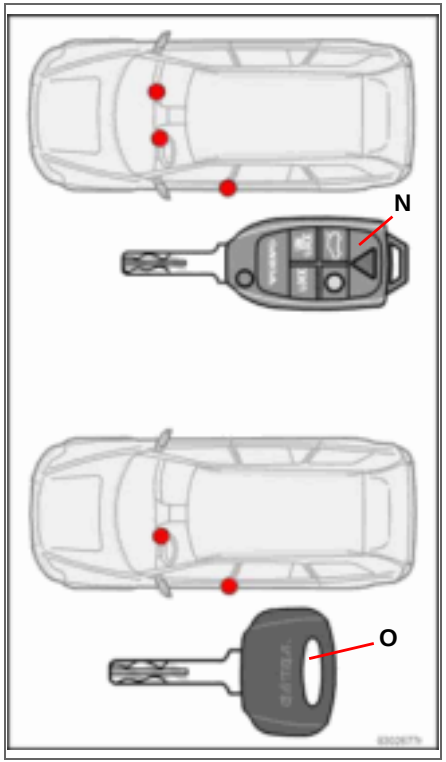
Keys and remote controls 100
Locking and unlocking 103
Child safety locks 106
Alarm (option) 108



05

Keys and remote controls

Keys – Electronic immobiliser



1. Master key
   Key for all locks.
2. Service key[1]
   Key to front door, ignition switch and steering wheel lock.

The car is delivered with two master keys and one service key[1]. One of the master keys is collapsible and equipped with an integrated remote control.

If you lose one of your keys, you must take all other keys to an authorised Volvo workshop. As a crime prevention measure, the code of the lost key is erased from the system. At the same time, the other keys must be re-coded in the system.

The key blades' unique code is available at authorised Volvo workshops, who can order new key blades.

A maximum of six remote controls/key blades can be programmed and used for one single car.

Immobiliser
The keys are equipped with coded chips. This code must match the reader in the ignition switch. The car can only be started if the correct key with the correct code is used.

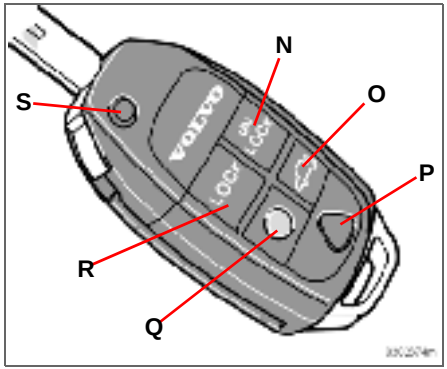
[1] Certain markets only

NOTE

The master key blade (1) must be fully extended (as illustrated) when starting the car. Otherwise there is a risk that the immobiliser function will prevent the car from starting.

Ignition keys and electronic immobiliser
The ignition key must not hang with other keys or metal objects on the same key ring. The electronic immobiliser could be activated erroneously and the car will not start.

Remote control functions



1. Unlock
2. Open tailgate
3. Panic alarm function
4. Approach lighting
5. Locks
6. Folding/opening the key

Unlocking

– Press the button (1) once to unlock all doors, the tailgate and the fuel filler flap simultaneously.

Tailgate

– Press the button (2) once to unlock the tailgate only.

Panic alarm function

The panic alarm function can be used to attract attention in the event of an emergency. If the red button (3) is held depressed for at least three seconds or is pressed twice in a short period of time, the direction indicators and horn are triggered. The panic alarm is deactivated automatically after 25 seconds or by pressing any of the buttons on the remote control.

Approach lighting

Do the following when you approach the car:

– Press the yellow button (4) on the remote control.

The interior lighting, position/parking lamps, number plate lighting, door mirror lamps (option) will now switch on. The lighting on a coupled trailer will also switch on. These lamps remain lit for 30, 60 or 90 seconds. An authorised Volvo workshop can select a suitable time setting.

To extinguish the approach lighting:

– Press the yellow button again.

Locking

Lock all doors, tailgate and fuel filler flap with button (5). There is a delay of approx. 10 minutes for the fuel filler flap.

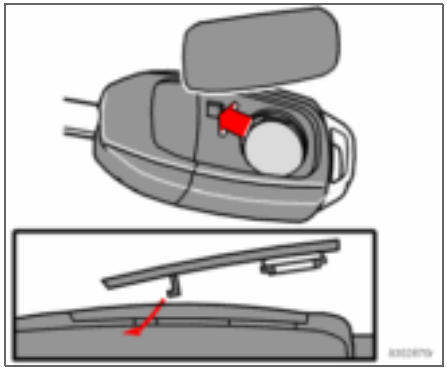
Folding/opening key

The key can be folded by pressing button (6) while folding the key blade into the keypad.

The folding key will open automatically with one press of the button.

Keys and remote controls

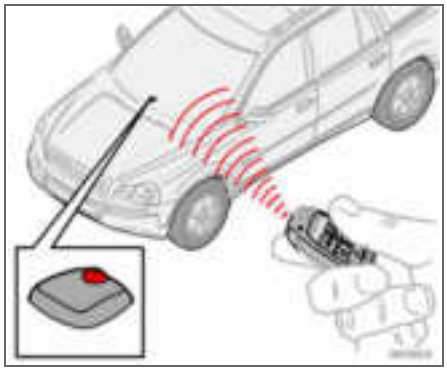
Replacing the remote control battery



Replace the battery after repeated failure by the locks to respond when remote control signals are transmitted within a normal distance.

- Remove the cover by carefully prising up the rear edge of with a small screwdriver.
- Replace the battery (type CR 2032, 3 V) – with the plus side facing up. Avoid touching the battery and its contact surfaces with your fingers.
- Refit the cover. Make sure the rubber seal is properly fitted and free from damage to prevent water from entering.
- Turn the old battery in to your Volvo workshop so that it is disposed of in an environmentally friendly way.

Locking/unlocking the car from outside



The master key or remote control locks/unlocks all side doors and the tailgate simultaneously. The side door lock buttons and inside handles are disengaged[1].

The fuel filler flap can be opened when the car is unlocked. The flap remains unlocked for 10 minutes after the car has been locked.

NOTE

The car can be locked[1] even if a door or the tailgate is open. When the door is closed there is a risk that the keys will be locked in.

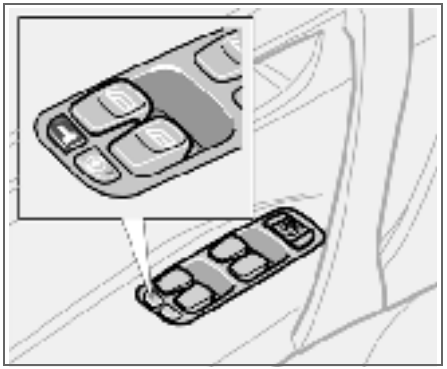
[1] Applies to certain markets

Automatic relocking

If none of the doors or the tailgate is opened within two minutes of unlocking with the remote control then all are locked again automatically. This function prevents the car from being left unlocked unintentionally.

For cars with alarm, see page 108.

Automatic locking



Automatic locking is activated and deactivated from the control panel in the driver's door. The function operates by locking the doors automatically when the speed of the car exceeds 7 km/h. They remain locked until a door is opened from the inside or when all doors are unlocked from the control panel.

Activating/deactivating automatic locking

The ignition key must be in position I or II.

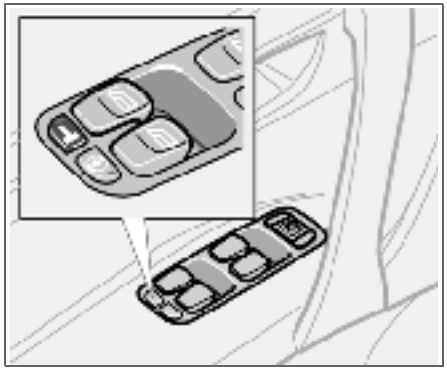
Press the **READ** button in the left-hand stalk switch to acknowledge any messages in the information display.

Press and hold the button for central locking until a new message for lock status is shown in the information display.

The messages **AUTOLOCK ACTIVATED** (the car is also locked when it moves) and **AUTOLOCK DEACTIVATED** respectively are shown in the information display.

Locking and unlocking

Locking/unlocking from inside

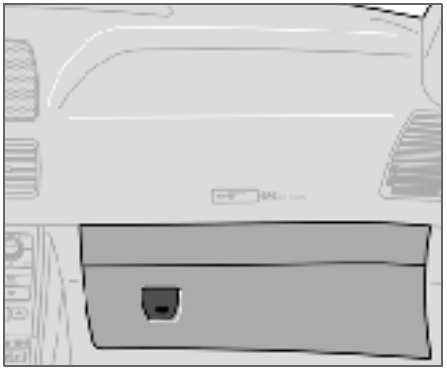


All the doors and the tailgate can be locked or unlocked simultaneously using the control panel in the driver's door (or passenger door).

All doors can be locked using the lock button on the control panel by each respective door.

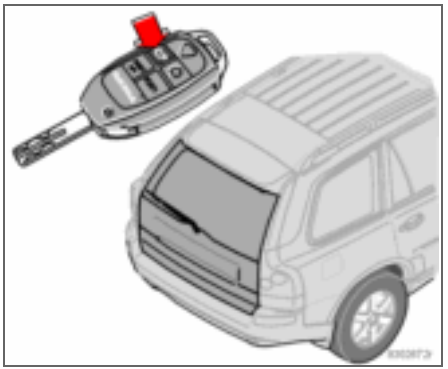
If the car is not locked from the outside then it can be unlocked by opening the door with the handle.[1]

Locking the glovebox



The glovebox can be locked/opened with the master key only – not with the service key.

Locking/unlocking the tailgate with the remote control



Unlocking the tailgate only:

- Press once on the button on the remote control as illustrated.
- If all doors are locked when you close the tailgate, it remains unlocked and its alarm is not armed after being closed. The other doors remain locked with their alarms armed.

[1] Applies to certain markets

– Press the **LOCK** button again to arm the alarm and lock the tailgate.

NOTE

If the **LOCK** button is used to unlock the tailgate without it being opened then it is re-locked automatically after approx. 2 minutes.

Deadlocks[1]

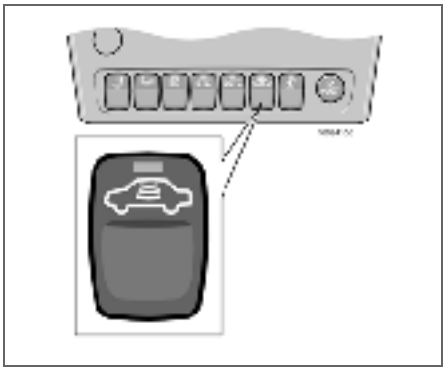
The car has a special deadlock function, which means that the doors cannot be opened from the inside if they are locked.

Deadlocks can only be activated from the outside by the driver's door being locked with the key or remote control. All doors must be closed before deadlocks can be activated. Once activated, the doors cannot be opened from the inside. The car can only be unlocked from the outside via the driver's door or by using the remote control.

Deadlocks are engaged after a 25 second delay after the doors have been closed.

[1] Certain countries

Temporary deactivation of the deadlocks and any alarm detectors



If others prefer to remain seated in the car with the doors locked from the outside, e.g. during transport by ferry, it is possible to deactivate the deadlocks.

– Insert the key into the ignition switch, turn it to position **II** and then back to position **I** or **0**.
– Press the button (see illustration).

If the car is equipped with an alarm, movement and tilt detectors are also deactivated. See page 109.

The light in the button illuminates until the car is locked with the key or the remote control.

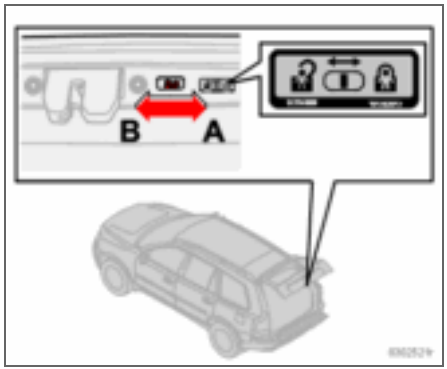
A message remains on the display as long as the key remains in the ignition switch. The detectors are reactivated and deadlocks re-engaged the next time the ignition is switched on.

WARNING

Do not allow anyone to remain in the car without first deactivating the deadlocks.

Child safety locks

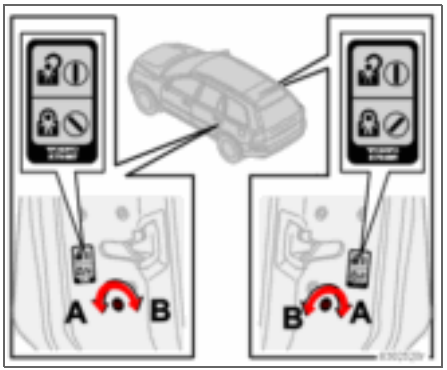
Manual child safety locks, tailgate and rear doors



Control for child safety lock – tailgate.

The controls for the child safety locks are in the bottom edge of the tailgate[1] and in the rear edge of the rear doors. The controls are only accessible when the tailgate is open or the rear doors are open.

– Adjust the tailgate control by sliding it sideways between the outer positions (use a flat metal object, such as a screwdriver):



Controls for the child safety locks – left and right-hand rear doors

A: Child-safe position – the tailgate cannot be opened from inside.

B: Not child-safe position – the tailgate can be opened from inside.

– Adjust the control in the respective rear door by turning it between the outer positions (use a flat metal object, such as a screwdriver):

A: Child-safe position – the rear doors cannot be opened from inside; turn outwards.

B: Not child-safe position – the rear doors can be opened from inside; turn inwards.

WARNING

Always keep the lock buttons pulled up when driving. In the event of an accident, this allows the emergency services to get into the car quickly. Passengers in the rear seat cannot open the doors from inside if the child safety locks are activated.

[1] Certain markets only

Electric child safety locks – rear side doors[1]



Use the button in the centre console to activate/deactivate the child safety locks in the rear side doors.

– Turn the ignition key to ignition position **I** or **II**.
– Press the button.

When the light in the button illuminates, the rear power windows and rear doors are locked.

A message appears on the display, the child safety locks are activated/deactivated.

[1] Option in certain markets

NOTE

The rear doors cannot be opened from the inside as long as the electric child safety locks are activated.

Alarm (option)

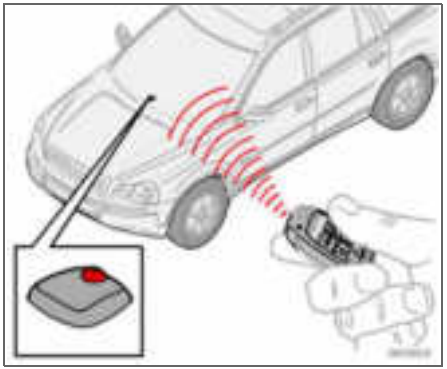
Alarm system

When the alarm is armed, it continually monitors all alarm inputs.

The alarm is triggered if:

- a door, the bonnet or tailgate opens
- a non-approved key is used in the ignition or if an attempt is made to force the lock
- a movement is detected in the passenger compartment (if fitted with a movement detector)
- the car is raised or towed away (if fitted with a tilt detector)
- a battery cable is disconnected
- anyone tries to disconnect the siren.

Alarm lamp on instrument panel



A light on the instrument panel indicates the alarm system's status:

- Lamp not lit – the alarm is deactivated.
- The lamp flashes once every other second after the car's direction indicators have made one long flash signal – the alarm is armed.
- Lamp flashes quickly, after deactivating the alarm and until the ignition is switched on: The alarm has been triggered.
- If there is a fault in the alarm system, a message appears in the display.

If there is a fault in the alarm system, a message appears on the information display. Contact an authorised Volvo workshop.

NOTE

Do not attempt to repair or modify alarm system components. All such attempts can affect terms of insurance.

Arming the alarm

– Press the **LOCK** button. A long flash from the car's direction indicators confirms that the alarm is armed and that all the doors are locked.

IMPORTANT

The alarm is fully armed when the car's direction indicators have made one long flash and the light on the dashboard flashes once every other second.

Disarming the alarm

– Press the remote control's **UNLOCK** button. Two short flashes from the car's direction indicators confirm that the alarm has been deactivated.

If the remote control batteries are discharged then the alarm can be disarmed by turning the key to ignition position **II**.

Automatic alarm activation

This function prevents you accidentally leaving the car without the alarm on.

If none of the doors or the tailgate are opened within two minutes of disarming the alarm (and the car has been unlocked with the remote control), the alarm is automatically rearmed, and the car is locked at the same time.

Automatic alarm activation

In certain countries (e.g. Belgium, Israel) the alarm is activated after a certain delay if the driver's door was opened and closed but the car was not re-locked.

Deactivating a triggered alarm

– Press the **UNLOCK** button on the remote control or insert the key in the ignition switch.

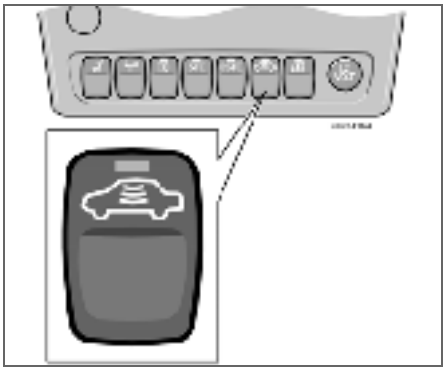
Confirmation is given by two short flashes from the direction indicators.

Alarm signals

When the alarm is triggered, the following happens:

- A siren sounds for no more than 25 seconds. The siren has its own battery which is used if the car battery has insufficient charge or is disconnected.
- All direction indicators flash for five minutes or until the alarm is deactivated.

Temporary deactivation of the deadlocks and alarm detectors



To prevent the alarm being triggered erroneously, such as with a dog in the car or during a ferry journey, the movement and tilt detectors can be disengaged.

– Insert the key in the ignition switch, turn it to position **II** and then back to position **I** or **0**.
– Press the button.

The light remains illuminated until the car is locked using the key or remote control.

A message remains on the display as long as the key remains in the ignition switch. The temporary disengagement is deactivated when the ignition is switched on. If the car has deadlocks, then these are also re-engaged at the same time. See page 105.

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06

General

Economical driving

Driving economically means driving smoothly while thinking ahead and adjusting your driving style and speed to the prevailing conditions.

- Get the engine warmed up as soon as possible.
- Do not let the engine idle, but drive at light loads as soon as it is possible. A cold engine consumes more fuel than a warm one.
- Avoid sudden unnecessary acceleration and heavy braking.
- Do not drive with unnecessary loads in the car.
- Do not use winter tyres when the roads are dry.
- Remove the load carrier when it is not in use.
- Avoid driving with open windows.

Slippery driving conditions

Practise driving on slippery surfaces under controlled conditions to learn how the car reacts.

Engine and cooling system

Under special conditions, for example when driving in hilly terrain, extreme heat or with heavy loads, there is a risk that the engine and cooling system will overheat.

Avoid overheating the cooling system

- Maintain a low speed when driving with a trailer up long, steep ascents.
- Do not turn the engine off immediately you stop after a hard drive.
- Remove any auxiliary lamps from in front of the grille if driving in extreme high temperatures.

Avoid overheating the engine

Do not exceed engine speeds of 4500 rpm (diesel engine: 3500 rpm) if driving with a trailer or caravan in hilly terrain. The oil temperature can become too high.

Open tailgate

Avoid driving with the tailgate open. If it is necessary to drive with the tailgate open for a short distance, proceed as follows:

– Close all windows.

– Set the air distribution to the windscreen and floor and run the fan at high speed.

WARNING

Do not drive with the tailgate open. Toxic exhaust fumes can be drawn into the car through the cargo area.

Driving on rough roads

The Volvo XC90 is primarily designed for driving on main roads, but also has good handling properties on uneven or rough roads. Keep the following in mind in order to preserve the service life of your car:

- Drive slowly on rough roads so you do not damage the car's underbody.
- If the ground is loose or is made up of dry sand or snow, it is always best to keep the car moving at all times and avoid shifting. Do not stop the car.
- If the road is extremely steep and there is a risk of overturning, never try to turn the car around. Reverse back down. Do not drive diagonally across an incline. Drive in the direction of the incline.

NOTE

Avoid driving on steep slopes if the fuel level is low. The catalytic converter could be damaged if the engine does not receive enough fuel. When driving on extremely steep slopes, make sure the tank is more than half full to avoid the risk of breakdown.

Driving in water

The car can be driven through water at a maximum depth of 40 cm at a maximum speed of 10 km/h. Extra caution should be exercised when passing through flowing water.

IMPORTANT

Engine damage may occur if water enters the air filter.
In greater depths, water can enter the transmission. This reduces the lubricating ability of the oils and shortens the service life of these systems.

When driving in water, maintain a low speed and do not stop the car. When the water has been passed, depress the brake pedal lightly and check that full brake function is achieved. Water and mud for example can make the brake linings wet resulting in delayed brake function.

NOTE

Clean the electric contacts of the electric engine block heater and trailer coupling after driving in water and mud.

IMPORTANT

Do not let the car stand with water over the sills for any long period of time. This could cause electrical malfunctions.

In the event of stalling in water, do not try to restart. Tow the car out of the water.

Do not overload the battery

The electrical functions in the car load the battery to varying degrees. Avoid having the ignition key in position **II** when the engine is switched off. Use position **I** instead, as less power is used. The 12 volt outlet in the cargo area supplies power even when the ignition key is removed.

Examples of functions that use a lot of power:

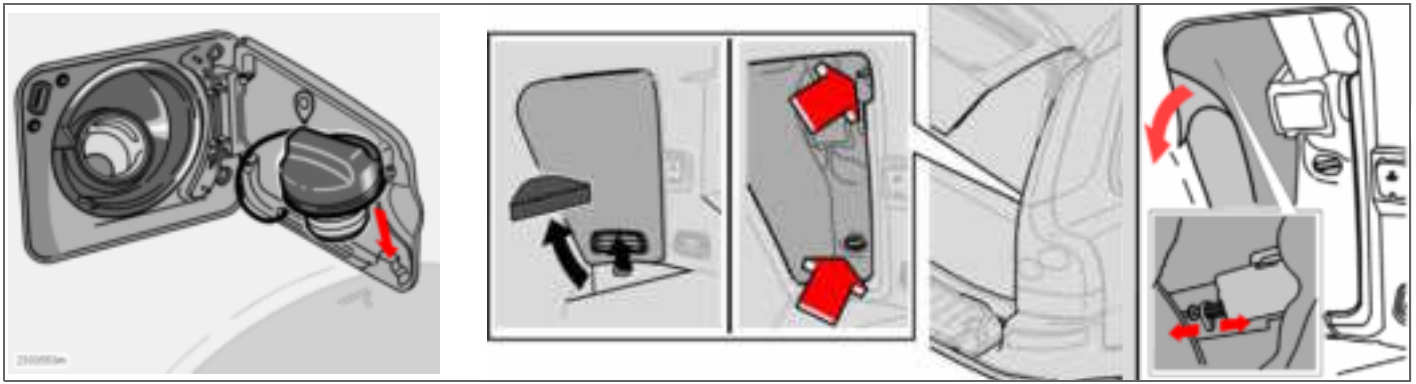
- ventilation fan
- windscreen wipers
- audio equipment (high volume)
- parking lights.

Also, be aware of different accessories that load the electrical system. Do not use functions which use a lot of power when the engine is switched off.

If the battery voltage is low, a message appears on the display. The energy-saving function shuts down certain functions or reduces the load on the battery by, for example, slowing the ventilation fan and switching off the audio equipment. Charge the battery by starting the engine.

Refuelling

Opening the fuel filler flap



The fuel cap is inside the fuel filler flap on the right-hand rear wing and hangs up on the inside of the fuel filler flap.

The fuel filler flap can be opened when the car is unlocked.

NOTE

The filler flap remains unlocked for ten minutes after the car is locked. It then locks automatically.

Emergency unlocking of the fuel filler flap

The fuel filler flap can be opened manually when necessary if it cannot be opened normally.

Proceed as follows:

- Lift up the corner piece from the floor in the rear right-hand corner of the cargo area.
- Open the fuel filler flap by lifting up the handle and pulling it out.
- Fold aside the insulation in order to access the flap's electrical lock.
- Insert your hand and locate the lock. It's location is approximately inside the rear edge of the fuel filler flap.
- Pull the lock plunger straight back. The flap can now be folded out. After refuelling the flap can be relocked by closing it and pushing the lock plunger forward.

WARNING

There are sharp edges behind the panel so move your hands slowly and carefully.

Fuel filler flap

High outside temperatures can cause some overpressure in the tank. Open the cap slowly.

NOTE

Refit the fuel cap after refuelling. Turn until one or more clear clicks are heard.

Filling up with fuel

Do not overfill the tank but fill until the pump nozzle cuts out.

NOTE

Excess fuel in the tank can overflow in hot weather.

Fuel of a lower quality than that specified on page 249 should not be used as engine power and fuel consumption can be negatively affected.

WARNING

Fuel which spills onto the ground can be ignited by the exhaust fumes.

Switch off the fuel-driven heater before starting to refuel.

Never carry an activated mobile phone when refuelling. The ring signal could cause spark build-up and ignite petrol fumes, leading to fire and injury.

Petrol

IMPORTANT

Do not add cleaning additives to the petrol, unless recommended by Volvo.

Diesel

At low temperatures (–5 °C to –40 °C), a paraffin precipitate may form in the diesel fuel, which can lead to ignition problems.

IMPORTANT

Use special winter grade fuel during cold months.

Starting the engine

Before starting the engine

– Apply the parking brake.

Automatic gearbox

– Gear selector in position **P** or **N**.

Manual gearbox

– Shift the gear lever into neutral and hold the clutch pedal fully depressed. This is particularly important in very cold conditions.

WARNING

Never remove the ignition key from the steering lock while driving or when the car is being towed. The steering lock could otherwise be activated, making it impossible to steer the car.

The ignition key must be in position **II** when the car is being towed.

NOTE

The master key blade must be fully extended (as illustrated on page 100) when starting the car. Otherwise there is a risk that the immobiliser function will prevent the car from starting.

NOTE

The idling speed can be noticeably higher than normal for certain engine types during cold starting. This is so that the emissions system can reach normal operating temperature as quickly as possible, which minimises exhaust emissions and protects the environment.

Starting the engine

Petrol

– Turn the ignition key to position **III**. If the engine does not start within 5–10 seconds, release the key and try again.

Diesel

1. Turn the ignition key to position **II**. An indicator symbol in the combined instrument panel shows that engine preheating is underway, see page 46.
2. Turn the ignition key to position **III** when the indicator symbol goes out.

Diesel particle filter (DPF)[1]

Diesel cars may be equipped with a particle filter, which results in more efficient emission control. The particles in the exhaust gases are collected in the filter during normal driving. So-called regeneration is started in order to burn away the particles and empty the filter. This requires the engine to have reached normal operating temperature.

Regeneration of the filter takes place automatically at an interval of 300 – 900 km depending on driving conditions. Regeneration normally takes between 10 and 20 minutes. During this time fuel consumption may increase slightly.

The rear window heating may be activated automatically to increase the load on the engine during regeneration without warning.

Regeneration in cold weather

If the car is frequently driven short distances in cold weather then the engine does not reach normal operating temperature. This means that regeneration of the diesel particle filter does not take place and the filter is not emptied.

When the filter has become approximately 80% full of particles, the yellow information symbol on the dashboard illuminates, and the message **SOOT FILTER FULL SEE MANUAL** is shown on the dashboard display. Start regeneration of the filter by driving the car until the engine reaches normal operating temperature, preferably on a main road or motorway. The car should then be driven for approximately 20 minutes more. When regeneration is complete the message is cleared automatically.

[1] Certain markets.

IMPORTANT

If the filter fills up it may be incapable of functioning. Then it can be difficult to start the engine and there is a risk that the filter will have to be replaced.

Use the parking heater (option) in cold weather so that the engine reaches normal operating temperature more quickly.

Ignition keys and electronic immobiliser

The ignition key must not hang with other keys or metal objects on the same key ring. The electronic immobiliser could otherwise be activated accidentally.

Never rev the engine hard straight after a cold start! If the engine does not start or misfires, contact a Volvo workshop.

WARNING

Never switch off the ignition (position **0** or **1**) or remove the ignition key while the car is moving. The steering lock could otherwise be activated, making it impossible to steer the car.

Always remove the ignition key from the steering lock when leaving the car – especially if children are left alone in the car.

Ignition switch and steering lock



0 – Locked position
The steering lock is activated when the key is removed from the lock.

I – Radio position
Certain electrical components can be switched on. The engine's electrical system is not activated.

II – Driving position
Key position when driving. The car's electrical system is connected.

III – Start position
The starter motor is engaged. Release the key, which springs back automatically to the driving position, once the engine has started.

If the key is hard to turn, the front wheels may be turned in such a way that there is tension in the steering wheel lock. In which case, turn the wheel back and forth to make it easier to turn the key.

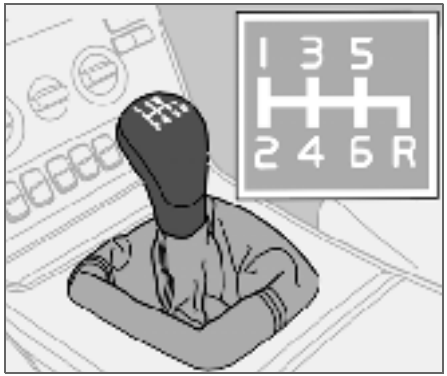
Autostart (3.2 and V8)
Using the autostart function, the ignition key does not need to be kept in the start position (position **III**) until the engine has started. Turn the ignition key to the start position and release it. The starter motor then operates automatically (up to ten seconds) until the engine has started.

NOTE

Make sure the steering wheel locks when you leave the car. This reduces the risk of theft.

Manual gearbox

Gear positions



– Depress the clutch pedal fully during each gear change.
– Remove your foot from the clutch pedal between gear changes. Follow the appropriate shifting pattern.

Use 6th gear as often as possible for the best possible fuel economy.

Reverse gear inhibitor

Only engage reverse gear when the car is stationary.

Cold start

When starting in low temperatures, the gear changes can sometimes feel hard. This is due to the gearbox oil's viscosity at low temperatures. To minimise engine emissions, the gearbox shifts up later than normal when the engine is started at low temperatures.

NOTE

Depending on the engine temperature when the engine is started, the idle speed after a cold start may be higher than normal for certain engine types.

Turbo engine

When the engine is cold, the transmission shifts gears at higher revs. This allows the catalytic converter to reach normal operating temperature more quickly, with less exhaust emissions.

Adaptive system

The gearbox is controlled by what is known as an adaptive system. The system continually monitors how the gearbox is behaving and senses every gear change for optimum change quality.

Lock-up function

The gears have a lock-up function (locked gears), which gives better engine braking and lower fuel consumption.

Kick-down

When the accelerator pedal is pressed all the way to the floor, beyond the position normally regarded as full acceleration, a lower gear is immediately engaged. This is known as kick-down.

If the accelerator is released from the kick-down position, the gearbox automatically changes up.

Kick-down is used when maximum acceleration is needed, such as for overtaking.

To prevent overrevving, the gearbox control program has a protective downshift inhibitor which prevents the kick-down function.

The kick-down function cannot be used in manual gear position.

Safety systems

Cars with an automatic gearbox have special safety systems:

Keylock

To remove the ignition key, the gear selector must be in the **P** position. The key is locked in all other positions.

Parking position (P)

Stationary car with engine running:

– Hold your foot on the brake pedal when moving the gear selector to another position.

Electric gear inhibitor – Shiftlock

Parking position (P position)

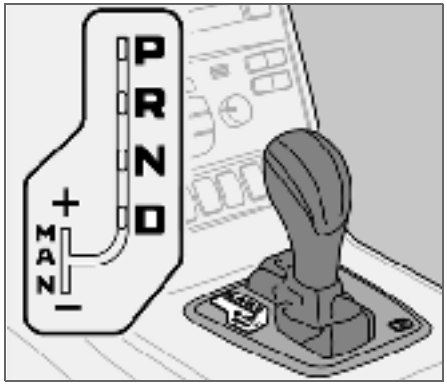
To be able to move the gear selector from the **P** position to other gear positions, the ignition key must be in position **I** or **II** and the brake pedal must be depressed.

Shiftlock – Neutral (N position)

If the gear selector is in the **N** position and the car has been stationary for at least three seconds (irrespective of whether the engine is running) then the gear selector is locked in the **N** position.

To be able to move the gear selector from the **N** position to another gear position, the brake pedal must be depressed and the ignition key must be in position **II**.

Automatic gearbox



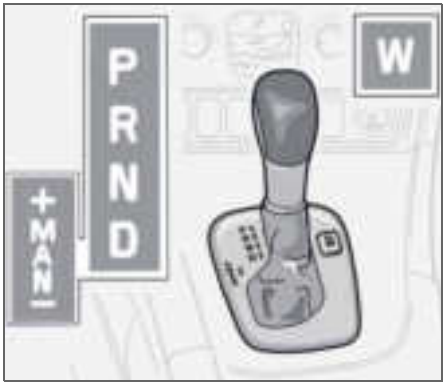
P – Parking position
Select position **P** when you wish to start the engine or park the car.

IMPORTANT

The car must be stationary when position **P** is selected.

NOTE

The brake pedal must be depressed to move the gear selector from the **P** position.



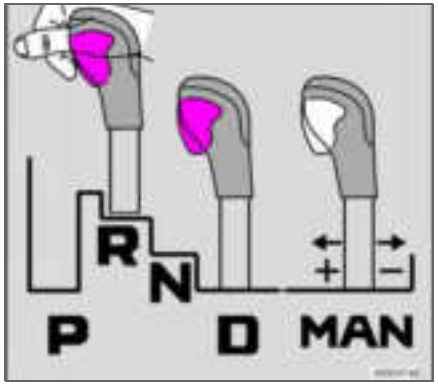
In **P** the gearbox is mechanically locked. Always apply the parking brake when parking the car.

R – Reverse
The car must be stationary when **R** is selected.

N – Neutral
N is the neutral position. No gear is engaged and the engine can be started. Apply the parking brake when the car is stationary with the gear selector in position **N**.

D – Drive
D is the normal driving position. The car automatically shifts between the different gears of the gearbox based on the level of acceleration and speed. The car should be stationary when **D** is selected from position **R**.

Gear selector inhibitor



The gear selector can always be moved freely between **N** and **D**. Other positions are locked with a catch that is released with the inhibitor button on the gear selector.

With one press on the inhibitor button you can move the lever forwards or backwards between the gear positions, **N, R** and **P**.

Manual positions

To move from the automatic driving position **D** to a manual position, move the gear selector to position **M**. To go from position **M** to the automatic driving position **D**, move the selector to position **D**.

On the 5-speed automatic gearbox, gears **3, 4** and **5**[1] have the Lock-up function (locked gears), which provides better engine braking and lower fuel consumption.

While driving

The manual gearshift mode can be selected at any time while driving. The engaged gear is locked until you choose another gear.

If the gear selector is moved to **–** (minus) the car changes down a gear and engine brakes at the same time as the accelerator pedal is released. If the gear selector is moved to **+** (plus) the car changes up a gear.

Third gear is the highest gear that can be used when starting.

[1] 2nd and 6th gear also have lock-up on the 6-speed automatic gearbox.

W – Winter



The W button is used to activate and deactivate the winter program **W**. Display of the **W** symbol in the combined instrument panel indicates that the winter program is active.

The winter programme starts the gearbox in 3rd gear to make it easier to pull off on slippery roads. When the programme is engaged, lower gears are activated only by kick-down.

The **W** program can be selected regardless of the position of the gear selector, but is only operational when the selector is in position **D**.

All-wheel drive

All-wheel drive – AWD

All-wheel drive is always engaged.

All-wheel drive means that all four road wheels are driven at the same time. Power is automatically distributed between front and rear wheels. An electronically controlled clutch system distributes the power to the pair of wheels that grips best. This provides the best traction and prevents wheel spin.

Under normal driving conditions, the majority of power is transmitted to the front wheels.

All-wheel drive improves driving safety in rain, snow and icy conditions.

Brake servo

If the car is rolling or is being towed with the engine turned off, the brake pedal must be pressed about five times harder than when the engine is running. If the brake pedal is pressed when the engine is started, you will feel the pedal drop. This is normal and due to the brake servo becoming active. This may be more noticeable if the car has emergency brake assistance (EBA).

WARNING

The brake servo only works when the engine is running.

NOTE

If braking with the engine switched off, press the brake pedal sharply once, not repeatedly.

Brake circuits



This symbol lights if a brake circuit is not working.

If a fault should occur in one of the circuits, it is still possible to brake the car. The brake pedal will travel further and may feel softer than normal. Harder pressure on the pedal is needed to produce the normal braking effect.

Dampness can affect braking characteristics

Brake components become wet when the car is driven in heavy rain, through pools of water or when the car is washed. This may alter brake pad friction characteristics so that there is a delay before braking effect is noticed.

Press the brake pedal lightly from time to time if driving for long stretches in rain or slushy snow, as well as after setting off in very damp or cold weather. This warms up the braking surfaces and dries off any water. It is also recommended to do this before parking the car for a long period in such weather conditions.

If the brakes are used heavily

When driving in the Alps or other roads with similar characteristics, the car's brakes are heavily loaded even if the brake pedal is not being depressed especially hard.

Because speed is often low, the brakes are not cooled as effectively as when driving on flat roads at higher speed.

So as not to overload the brakes, shift down when driving downhill instead of using the foot brake. Use the same gear driving downhill as you would use driving uphill. This method uses engine braking more efficiently and requires the foot brake for only brief periods.

Bear in mind that driving with a trailer puts an additional load on the car's brakes.

Anti-lock braking system (ABS)



The anti-lock braking system (ABS) prevents the wheels from locking up under braking.
This means the ability to steer is maintained and it is easier to swerve to avoid a hazard, for example.

After the engine has been started, the ABS will perform a brief self-test at a speed of about 20 km/h. This can be felt and heard as pulses in the brake pedal.

To get the most out of the ABS:

- Depress the brake pedal with full force. Pulses will be felt.
- Steer the car in the direction of travel. Do not release the pressure on the pedal.

Practice braking with the ABS system in a traffic-free area and in different weather conditions.

The ABS symbol illuminates for two seconds if there was a fault in the ABS system when the engine was last running.

Brake system

Electronic brake force distribution system – EBD

The Electronic Brakeforce Distribution system (EBD) is an integrated part of the ABS system. The EBD system controls the brake force to the rear wheels so that the best possible braking force is always available. Pulses will be heard and felt through the brake pedal when the system regulates brake force.

WARNING

If the BRAKE and ABS warning symbols are lit at the same time, a fault may have occurred in the brake system. If the level in the brake fluid reservoir is normal, drive carefully to the nearest authorised Volvo workshop to have the brake system checked.

If the brake fluid is under the **MIN** level in the brake fluid reservoir, do not drive further before topping up the brake fluid.

The reason for the loss of brake fluid must be investigated.

Emergency brake assistance – EBA

(Emergency brake assistance) In case of sudden braking, full-strength braking is provided instantaneously. The EBA function senses when heavy braking is underway by registering how quickly the brake pedal is depressed. Continue braking without easing off on the brake pedal. The function is suspended when the pressure on the brake pedal eases. This function is always active and cannot be disengaged.

NOTE

When EBA is activated the brake pedal lowers slightly more than usual, depress (hold) the brake pedal as long as necessary. If the brake pedal is released then all braking ceases.

General

The Dynamic Stability and Traction Control system (DSTC) improves the car's traction and helps the driver to avoid skidding.

A pulsing sound may be noticed during braking or acceleration when the system is in action. The car may accelerate more slowly than expected.

Active Yaw Control

The function limits the driving and brake force of the wheels individually in order to stabilise the car.

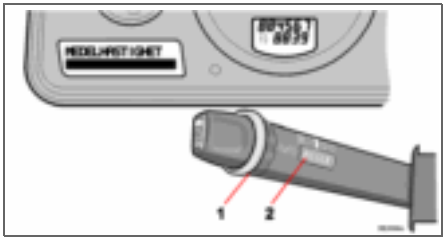
Spin Control

The function prevents the driving wheels from spinning against the road surface during acceleration.

Traction control system

The function is active at low speed and transfers power from the driving wheel that is spinning to the one that is not.

Reduced operation



System operation during skidding and acceleration can be partially deactivated.

Operation during skidding is delayed and so allows more skidding which provides greater freedom for dynamic driving.

Traction in deep snow or sand is improved as acceleration is no longer limited.

Operation

– Turn the thumbwheel (1) until the DSTC menu appears.

DSTC ON means that the system function is unchanged.

DSTC SPIN CONTROL OFF means that system operation is reduced.

– Press and hold **RESET** (2) until the DSTC menu is changed.

At the same time the symbol illuminates as a reminder that the system has been reduced. The system remains reduced until the engine is next started.

WARNING

Suppressing system function may alter the driving characteristics of the car.

NOTE

DSTC ON is shown for several seconds in the display each time the engine is started.

Messages in the information display

TRACTION CONTROL TEMPORARILY OFF means that the system has been temporarily reduced due to excessive brake temperature. The function is reactivated automatically when the brakes have cooled.

DSTC SERVICE REQUIRED means that the system has been disabled due to a fault.

– Stop the car in a safe place and turn off the engine.

If the message remains when the engine is restarted, drive to an authorised Volvo workshop.

Stability and traction control system

Symbols in the combined instrument panel



DSTC system

The symbol lights and goes out again after approx. two seconds
Indicates system check when the engine is started.

The symbol flashes
Indicates that the system is operating.

The symbol illuminates and stays lit DSTC SERVICE REQUIRED is shown in the display at the same time.

Indicates a fault in the **DSTC** system.

- Stop the car in a safe place and turn off the engine.
- Restart the car.

- If the warning symbol goes out, the fault was temporary and it is not necessary to visit a workshop.
- If the warning symbol remains lit, drive to an authorised Volvo workshop to have the system checked.

The symbol illuminates and stays lit DSTC SPIN CONTROL OFF is shown in the display at the same time.

Reminds that the **DSTC** system has been reduced.



Symbol for Warning
The symbol illuminates with a constant yellow glow and

TRACTION CONTROL TEMPORARILY OFF is shown in the display at the same time.

Indicates that the system has been temporarily reduced due to excessive brake temperature.

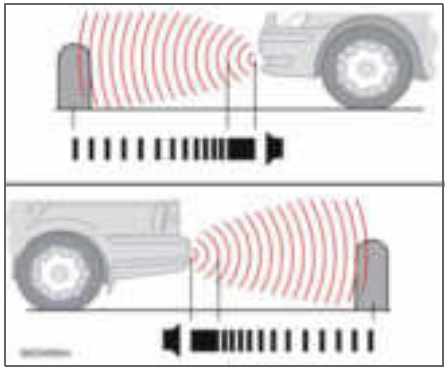
Automatic reactivation of the function takes place when the brake temperature has returned to normal.

WARNING

Under normal driving conditions, the **DSTC** system improves the car's road safety, but this should not be taken as a reason to increase speed.

Always follow the usual precautions for safe cornering and driving on slippery road surfaces.

General[1]



Parking assistance front and rear.

Parking assistance is used as an aid to parking. A signal indicates the distance to a detected object.

WARNING

Parking assistance does not relinquish the driver's own responsibility during parking. The sensors have blind spots where objects cannot be detected. Be aware of children and animals near the car.

[1] Depending on the market, the **Parking assistance** system may be either standard, an option or an accessory.

Function

The system is activated automatically when the car is started and the text message **Park Assist active, Exit to deactivate** is shown on the audio system display.

Parking assistance is active at speeds below 15 km/h. The system is deactivated at higher speeds. The system is reactivated when the speed falls below 10 km/h again.

The frequency of the signal increases as you come closer to an object in front of or behind the car. If the volume of another sound source from the audio system is high, this is automatically muted.

The tone becomes constant at a distance of about 30 cm. If there are objects within this distance behind or in front of the car, the signal alternates between left and right-hand speakers.

Rear parking assistance

The distance covered to the rear of the car is about 1.5 m. Rear parking assistance is activated when reverse gear is engaged. If the system is switched off, the audio system display shows the text **Park Assist deactivated Enter to activate** as soon as reverse gear is engaged. The signal comes from the rear loudspeakers.

The system must be deactivated when reversing with a trailer, or bike carrier on the towbar or similar. Otherwise the trailer or bike carrier would trigger the sensors.

Rear parking assistance is deactivated automatically when towing a trailer if a Volvo genuine trailer cable is used.

Front parking assistance[2]

The distance covered to the front of the car is about 0.8 metres. The signal comes from the front loudspeakers.

Front parking assistance cannot be combined with extra lights because the sensors are affected by the extra lights.

Fault indicator

If the information symbol illuminates with constant glow and **PARK ASSIST SERVICE REQUIRED** is shown on the information display then parking assistance is disengaged.

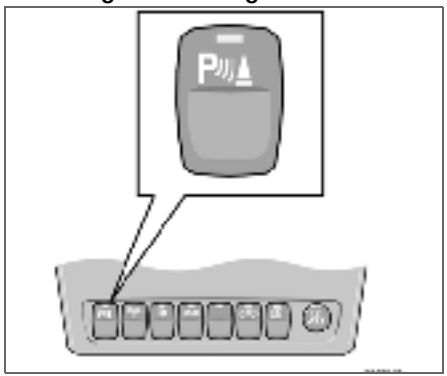
WARNING

Some sources may deceive the system with false signals. Examples of such sources include horns, wet tyres on asphalt, pneumatic brakes and motorcycle exhaust pipes. Ice and snow covering the sensors may also cause false warning signals.

[2] Provided that the parking assistance is mounted both front and rear.

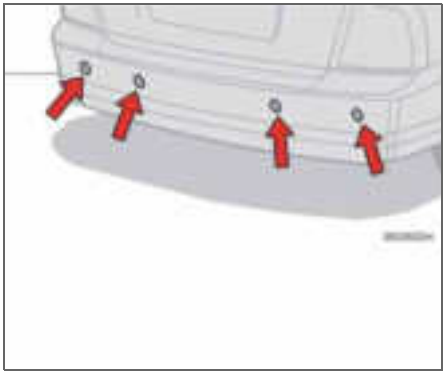
Parking assistance (option)

Activating/deactivating



Parking assistance can be deactivated with the button in the switch panel. The LED in the switch goes out. Parking assistance is reactivated with the switch and the LED illuminates.

Cleaning the sensors

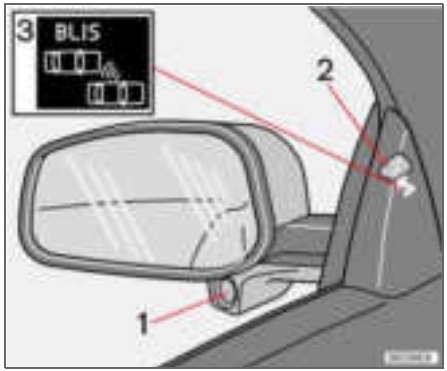


Parking assistance sensors.

The sensors must be cleaned regularly to ensure that they work properly. Clean them with water and car shampoo.

Blind Spot Information System BLIS (option)

General



Rearview mirror with BLIS system.

1. BLIS camera
2. Indicator lamp
3. BLIS symbol

WARNING

The system is a supplement to, not a replacement for, a safe driving style and use of the rearview mirrors. It can never replace the driver's attention and responsibility. The responsibility for changing lanes safely always rests with the driver.

BLIS is an information system that under certain conditions can help to draw the driver's attention to vehicles moving in the same direction in the so-called "blind spot".

The system is designed to work most effectively when driving in dense traffic on multi-lane highways.

BLIS is based on digital camera technology. The cameras (1) are fitted under the door mirrors.

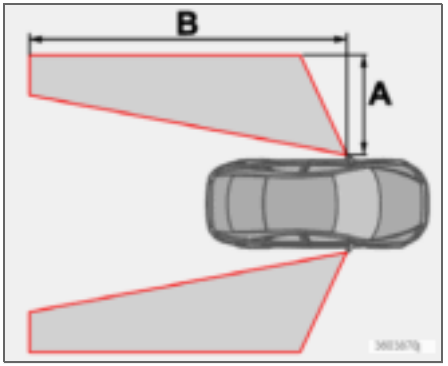
When a camera has detected a vehicle inside the blind spot zone the indicator lamp (2) illuminates with a constant glow.

NOTE

The lamp illuminates on the side of the car where the system has detected the vehicle. If the car is overtaken on both sides at the same time then both lamps illuminate.

BLIS advises the driver with a message if a fault arises in the system. If for example the system's cameras are obscured then the BLIS indicator lamp flashes and the information display shows a message. In such cases, check and clean the lenses. If necessary, the system can be switched off temporarily by pressing the BLIS button, see page 130.

Blind spots



"Blind spots" intended to be covered by BLIS cameras.

Distance A = approx. 3.0 m

Distance B = approx. 9.5 m

Cleaning

In order to work most effectively the BLIS camera lenses must be clean. The lenses can be cleaned with a soft cloth or damp sponge. Clean the lenses carefully so that they are not scratched.

IMPORTANT

The lenses are electrically heated to melt ice or snow. If necessary, brush snow away from the lenses.

Blind Spot Information System BLIS (option)

When BLIS operates

The system is active when the car is driven at a speed above 10 km/h.

Overtaking

The system is designed to react if you overtake at a speed of up to 10 km/h faster than the overtaken vehicle.

The system is designed to react if you are overtaken by a vehicle travelling up to 70 km/h faster than your vehicle.

WARNING

BLIS does not work in sharp bends.

BLIS does not work when the car is reversing.

A wide trailer coupled to the car can conceal other vehicles in adjacent lanes. It can prevent the vehicle in the screened area from being detected by BLIS.

Daylight and darkness

In daylight the system reacts to the shape of the surrounding vehicles. The system is designed to detect motor vehicles such as cars, trucks, buses and motorcycles.

In darkness the system reacts to the headlamps of surrounding vehicles. Vehicles with headlamps that are switched off are not detected by the system. This means for example that the system does not react to a trailer without headlamps which is towed behind a car or truck.

WARNING

The system does not react to bicycles or mopeds.

The BLIS cameras can be disrupted by intensive light or when driving in the dark when there are no light sources (e.g. street lighting or other vehicles). The system may then interpret the lack of light as if the cameras have been blocked.

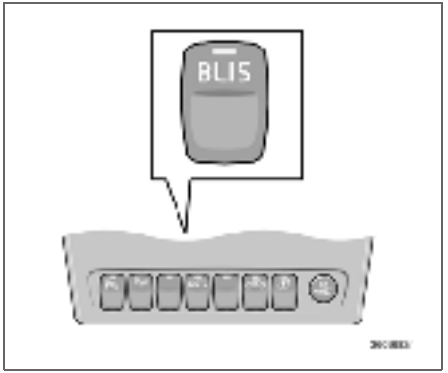
In both cases a message is shown on the information display.

When driving in such conditions system performance may be temporarily reduced and a text message is shown, see page 131.

If the message disappears automatically then BLIS has returned to normal functionality.

The BLIS cameras have limitations similar to the human eye, i.e. they "see" worse in heavy snowfall or thick fog for example.

Activating/deactivating



Button for activating/deactivating.

BLIS is activated when the engine is started. The indicator lamps in the door panels flash three times when BLIS is activated.

The system can be deactivated/activated by pressing **BLIS**.

When BLIS is deactivated the light in the button goes out and a text message is shown on the dashboard display.

When BLIS is activated the light in the button illuminates, a new text message is shown on the display and the indicator lamps in the door panels flash three times. Press the **READ** button to clear the text message. For more information on messages, see page 47.

BLIS system message

Text on the display	System status
BLIND-SPOT SYST SERVICE REQUIRED	BLIS not functioning
BLIS FUNCTION REDUCED	Reduced function
BLIND-SPOT SYST R CAMERA BLOCKED	Right-hand camera blocked
BLIND-SPOT SYST L CAMERA BLOCKED	Left-hand camera blocked
BLIND-SPOT SYST CAMERAS BLOCKED	One or both cameras blocked
BLIND-SPOT INFO SYSTEM OFF	BLIS system off
BLIND-SPOT INFO SYSTEM ON	BLIS system on

The messages above are only shown if the ignition key is in position II (or if the engine is running) and **BLIS** is active (i.e. if the driver has not switched off the system).

Towing and recovery

Never tow the car to bump start it

Jump start the car with a donor battery if the battery is flat and the engine does not start. Do not bump start the car.

IMPORTANT

Bump starting the car can damage the catalytic converter.

Towing

Find out the highest legal speed for towing before towing the car.

- Unlock the steering wheel lock so that the car can be steered.
- Bear in mind that the brake and power steering servos do not function when the engine is off. Approx. five times more pressure must be exerted on the brake pedal and steering requires much more force than usual.
- Drive gently. Keep the towline taut to avoid unnecessary jerking.

Automatic gearbox:

- Move the gear selector to position **N**.

Cars with automatic gearbox must not be towed at speeds above 80 km/h or further than 80 km. The car must always be towed facing forward. The engine cannot be bump started. "Jump starting", see page 134.

Manual gearbox:

- Move gear lever into neutral.
- Ensure the towrope is always taut to avoid violent jerks. Keep your foot on the brake pedal.

WARNING

The steering lock stays in the position it was in when the power was cut off. The steering lock must be unlocked before towing.

The ignition key must be in position **II**. Never remove the ignition key from the ignition switch while driving or when the car is being towed.

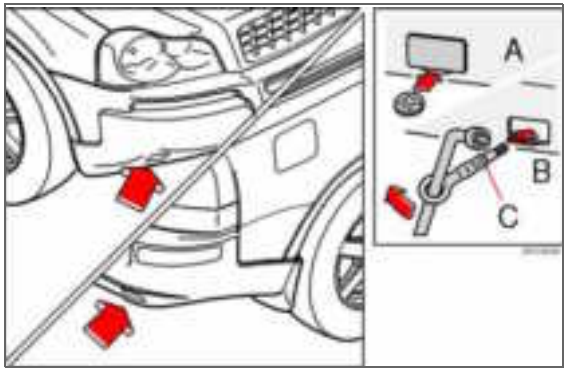
WARNING

The brake servo and power steering do not work when the engine is switched off. The brake pedal must be pressed about five times harder than normal, and the steering will be considerably heavier than normal.

Recovery

If only partially raised, cars with automatic gearbox must not be transported at speeds above 80 km/h or further than 80 km. During such transport, the wheels must always roll forward.

Towing eye



The towing eye is in the tool kit in the cargo area. You must screw the towing eye into place before towing. The socket and cover for the towing eye are on the right-hand side of each bumper.

Remove the cover as follows:

- Release the bottom edge of the cover (A) with a coin.
- Screw in the towing eye (B) firmly
- Screw in firmly, right up to the flange (C). You can use a wheel brace.

After use, unscrew the towing eye and refit the cover.

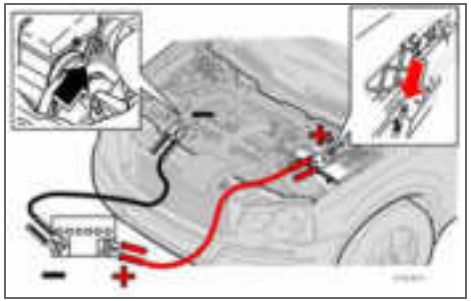
The towing eye may only be used for towing on roads, not for recovery after driving into a ditch or the like. Professional help should be called for recovery.

IMPORTANT

The towing eye cannot be fitted in the rear bracket on cars with towbar. In which case, secure the tow rope in the towbar. For this reason, it is advisable to always store the detachable towbar in the car.

Start assistance

Starting with a donor battery



If the battery in the car has become flat, you can "borrow" electric current from either a separate battery or the battery in another car. Always make sure the crocodile clips on the jump leads are attached securely to eliminate sparks during the start attempt.

When jump starting the car, the following steps are recommended to avoid risk of explosion:

- Turn the ignition key to position **0**.
- Ensure that the donor battery is 12 volt.
- If the donor battery is in another car, switch off the engine in the other car and ensure that the cars do not touch one another.
- Connect the red jump lead between the positive terminal on the donor battery (1+) and the positive terminal in your car (2+).
- Connect one end of the black jump lead to the donor battery's negative terminal (3–).
- Connect the other end of the black jump lead to the earthing point (4–) by the left-hand strut tower.
- Start the engine of the "donor car". Let the engine run a few minutes at a speed slightly higher than idle 1500 rpm.
- Start the engine of the car with the flat battery.
- Remove the jump leads, first the black and then the red. Ensure that neither of the black jump lead's clips comes into contact with the battery's positive terminal or the crocodile clip on the red jump lead.

IMPORTANT

Do not touch the crocodile clips during the start attempt. This could cause sparks.

WARNING

The battery can generate oxyhydrogen gas, which is highly explosive. One spark, which can be generated if you connect the jump leads incorrectly, is sufficient to make the battery explode.

The battery contains sulphuric acid, which can cause serious burns. If the acid comes into contact with eyes, skin or clothing, flush with large quantities of water.

If acid splashes into the eyes, seek medical attention immediately.

General

The load capacity is affected by extra accessories mounted on the car, such as a towbar, load carriers, space box, the passengers' combined weight etc. as well as towball load. The load capacity of the car is reduced by the number of passengers and their weight.

If the towing bracket is fitted by an authorised Volvo workshop, then the car is delivered with the necessary equipment for driving with a trailer.

- The car's towing bracket must be of an approved type.
- If the towbar is retrofitted, check with your Volvo dealer that the car is fully equipped for driving with a trailer.
- Distribute the load on the trailer so that the weight on the towing bracket follows the specified maximum towball load.
- Increase the tyre pressure to the recommended pressure for a full load. For tyre pressure decal location, see page 156.
- Clean the towbar regularly and grease the towball[1].
- Do not drive with a heavy trailer when your car is brand new. Wait until it has been driven at least 1000 km.

[1] Does not apply to the towball if using a stabiliser hitch.

- The brakes are loaded much more than usual on long and steep downhill slopes. Downshift to a lower gear and adjust your speed.
- The engine is loaded more heavily than usual when driving with a trailer.
- The engine and gearbox can overheat if the car is driven with a heavy load in hot weather. If the temperature gauge for the engine's cooling system goes into the red zone, stop and let the engine idle for a few minutes. The automatic gearbox responds through a built-in protection system. See the message on the information display. If the car overheats, the air conditioning may be switched off temporarily.
- In the interests of safety, speed should be restricted to 80 km/h, even if the laws of certain countries allow for higher speeds.
- Move the gear selector to parking position **P** when parking an automatic car with a hitched trailer. Always use the parking brake. Block the wheels with chocks when parking a car with hitched trailer on a hill.

Trailer weights

Information on permitted trailer weights, see page 243.

WARNING

Follow the stated recommendations for trailer weights. Otherwise, the rig may be difficult to control during evasive manoeuvres and braking.

NOTE

The stated maximum permitted trailer weights are those permitted by Volvo. National vehicle regulations can further limit trailer weights and speeds. Towbars can be certified for higher towing weights than the car can actually tow.

Driving with a trailer

Automatic gearbox, driving with a trailer

NOTE

Some models require an oil cooler for the automatic gearbox when driving with a trailer. Check with your nearest Volvo dealer as to what applies to your car if you have a retrofitted towbar.

Parking on a hill

1. Apply the parking brake.
2. Move the gear selector to park position **P**.

Starting on a hill

1. Move the gear selector to driving position **D**.
2. Release the parking brake (foot brake pedal).

Steep inclines

- Select an appropriate manual gear position when climbing steep inclines or at low speeds. This prevents the gearbox from changing up and keeps the gearbox oil cooler.
- Do not use a higher manual gear than the engine can "handle". It is not always economical to drive in high gears.
- Avoid driving with a trailer on inclines of more than 15 %.

Assisted starting with a trailer

Cars equipped with a V8 engine have an integrated function which reduces the risk of significant jerking and wheelspin when starting with a trailer hitched to the car.

Activating

To activate, the cables from the trailer must be connected to the trailer socket which is fitted beside the towbar, see page 137.

Deactivating

Unplug the cables from the electrical socket.

NOTE

The function is also activated when any other electrical equipment is plugged into the trailer socket, and the car then accelerates more gently when pulling away.

Levelling (option on cars seating five, standard on cars seating seven)

If your car is equipped with automatic levelling, the rear suspension always retains the correct ride height regardless of load. When the car is stationary, the rear suspension sinks. This is completely normal. When starting with a load, the level is pumped up after a certain distance.

Towbar

The towball must be cleaned and greased regularly. If a towball hitch with vibration damper is used, it is not necessary to grease the towball.

If the car is equipped with a detachable towbar, the towball mounting instructions must be followed carefully, see page 139.

WARNING

Be sure to attach the trailer's safety cable to the correct place.

WARNING

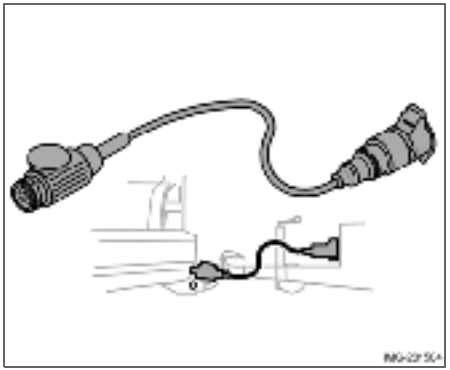
If the car is fitted with a Volvo detachable towbar:

- Follow the assembly instructions for the towball section carefully.
- The towball section must be locked with the key before setting off.
- Check that the indicator window shows green.

NOTE

Always remove the towball section after use. Keep it in the cargo area.

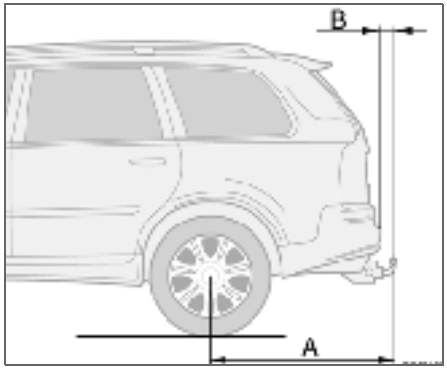
Trailer cable

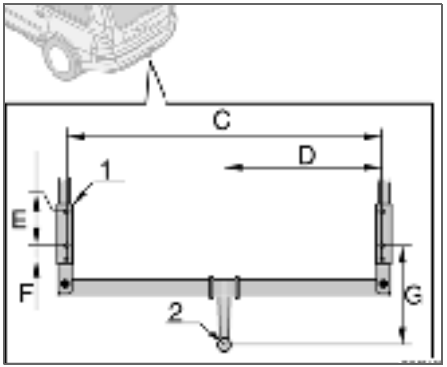


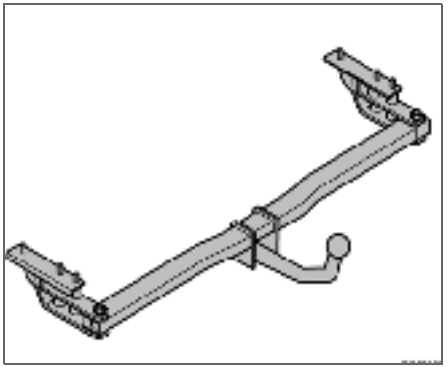
An adapter is required if the car's towbar has 13 pin electrics and the trailer has 7 pin electrics. Use an adapter cable approved by Volvo. Make sure the cable does not drag on the ground.

Towing equipment

Specifications



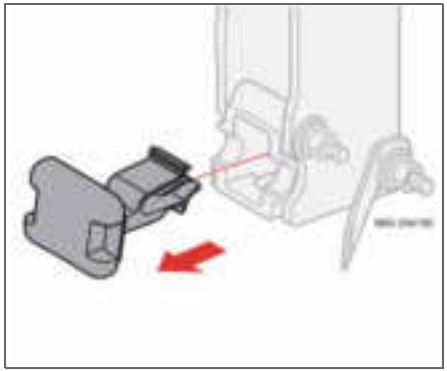




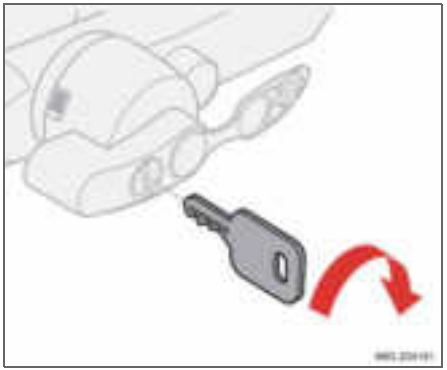
Dimensions for mounting points (mm)

	A	B	C	D	E	F	G
Fixed or detachable towbar	1110	85	1081	541	122	50	354
1	Side member						
2	Ball centre						

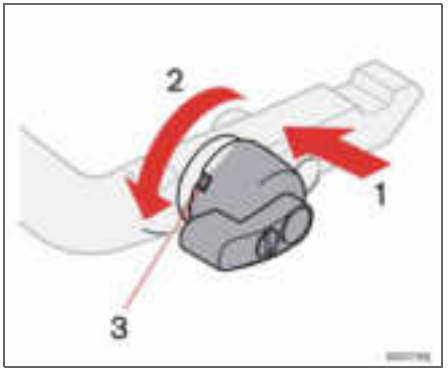
Fitting the towball



– Remove the guard plug.

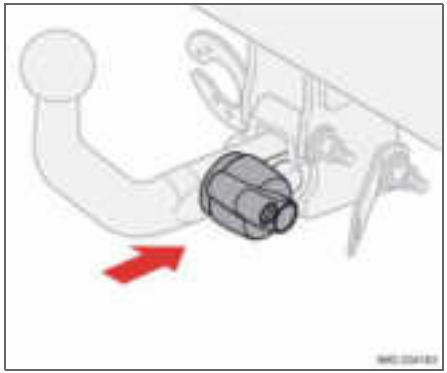


– Ensure that the mechanism is in the unlocked position by turning the key clockwise.

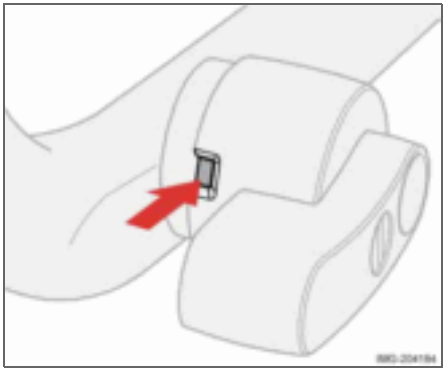


– Check that the indicator window (3) shows red. If the window does not show red, press in (1) and turn the locking wheel anticlockwise (2) until you hear a click.

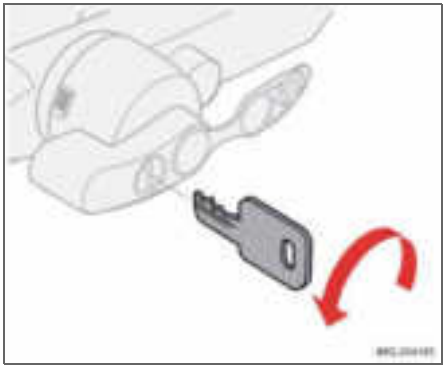
Detachable towbar



– Insert the towball section until you hear a click.



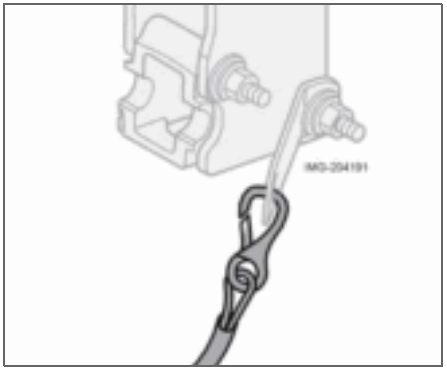
– Check that the indicator window shows green.



– Turn the key anticlockwise to the locked position. Remove the key from the lock.

Detachable towbar





NOTE

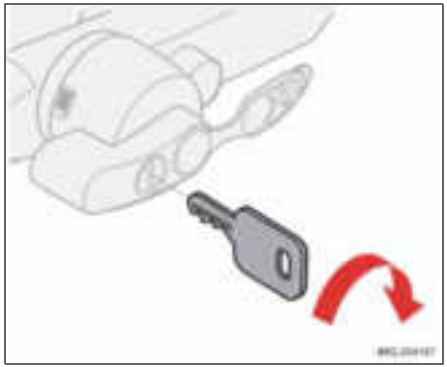
Check that the towball section is secure by pulling it up, down and back. If the towball section is not fitted correctly then it must be removed and refitted in accordance with the previous steps.

NOTE

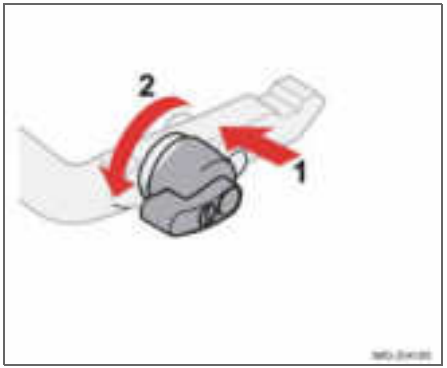
The trailer's safety cable must be attached to the attachment on the towbar.

Detachable towbar

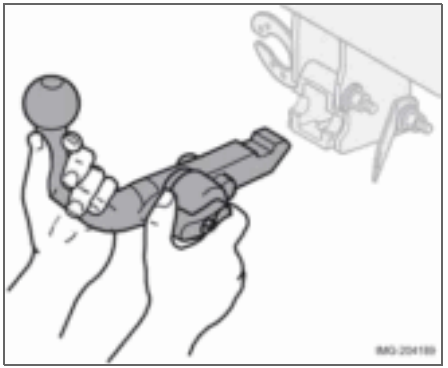
Removing the towball



– Insert the key and turn it clockwise to the unlocked position.

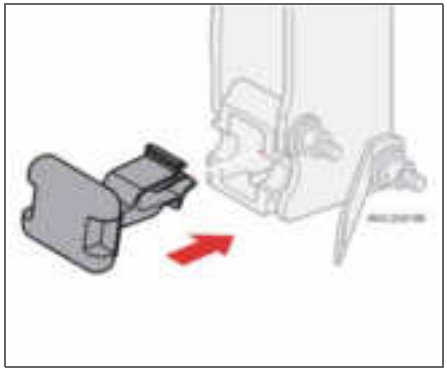


– Push in the locking wheel (1) and turn it anticlockwise (2) until you hear a click.



– Turn the locking wheel down fully, until it comes to a stop. Hold it in this position while pulling the towball rearward and upward.

Detachable towbar



– Insert the guard plug.

Loading

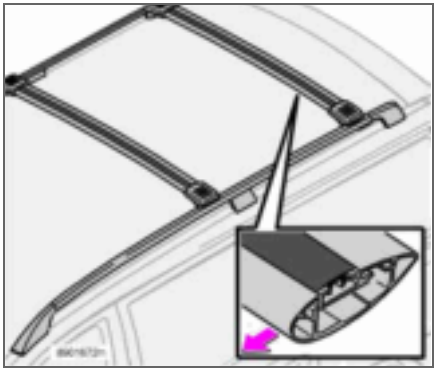
General

The load capacity is affected by extra accessories mounted on the car, such as towbar, towball load, load carriers, space box etc. and the passengers' combined weight. The load capacity of the car is reduced by the number of passengers and their weight. For information on permitted weights, see page 243.

WARNING

The car's driving characteristics change depending on how heavily it is loaded and how the load is distributed.

Load on the roof



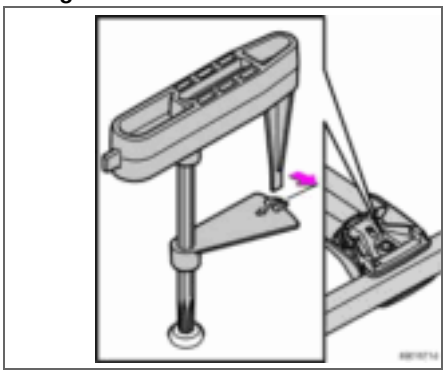
Load carrier position (accessory)

Make sure the load carrier is placed in the right direction on the roof rails. Load carriers can be positioned anywhere along the roof rails. When driving without a load, the front load carrier should be positioned 200 mm in front of the centre rail foot and the rear load carrier centred between the centre and rear rail foot (see illustration) to minimise wind noise. The longer load carrier should be in the front.

WARNING

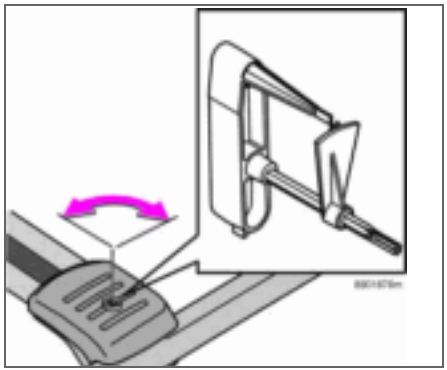
The car's centre of gravity and driving characteristics are altered by roof loads.

Fitting load carriers



Make sure the load carriers are pressed out firmly against the roof rails. Screw in the load carrier. Use the enclosed torque wrench, and tighten up to the mark on the torque wrench (equivalent to 6 Nm). See illustration.

Load carrier cover



Use the end of the torque wrench (see illustration) or the ignition key to loosen or secure the cover. Rotate ¼ turn.

Load carriers

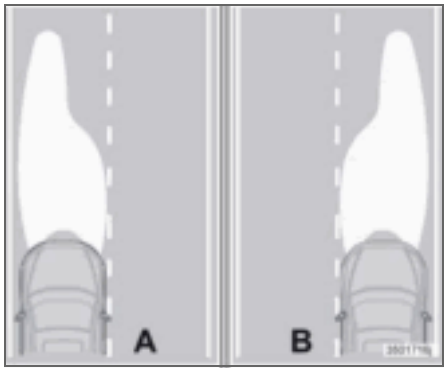
- To avoid damaging your car and to achieve the best level of safety when driving, we recommend that you only use load carriers that Volvo has specially designed for your car.
- Check periodically that the load carriers and load are properly secured. Lash the load securely with retaining straps.
- Distribute the load evenly over the load carriers. Do not load lopsidedly. Place the heaviest items at the bottom.
- Remember that the car's centre of gravity and driving characteristics change if you have a load on the roof.
- Keep in mind that the car's wind resistance and fuel consumption increase in proportion to the size of the load.
- Drive gently. Avoid quick accelerations, heavy braking and taking curves hard.

WARNING

Load no more than 100 kg on the roof, inclusive of the load carriers or space box. The car's centre of gravity and driving characteristics are altered by roof loads.

Adjusting headlamp pattern

Correct light pattern for right or left-hand traffic



A. Headlamp pattern for left-hand traffic
B. Right-hand traffic

So as not to dazzle oncoming drivers, the headlamp beam pattern can be altered by masking the headlamps. The quality of the beam pattern may not be as good.

Headlamp masking

Copy the templates found on page 147. Transfer the pattern to a self-adhesive, waterproof material such as opaque tape or similar.

The mask is positioned using the dot (5) in the headlamp lens as a reference point, which should align with the red dot on the respective template. The long red line on the illustrations corresponds to the line in the headlamp lens to which the template should be matched.

After copying the templates, check the measurements so that the reference measurements cover enough of the beam pattern.

The templates are for both LHD and RHD variants and are positioned as illustrated.

The upper illustration is for LHD cars. The lower illustration is for RHD cars.

Halogen headlamps

Copy templates 1 and 2. Check the measurements to ensure they are correct. Transfer the template to a self-adhesive, waterproof material and cut it out.

Position each template so that the arrows point towards the centre and the dot on the template matches the dot on the headlamp lens.

Reference measurements template 1 and 2:
The long sides of the templates should be approx. 82 mm.

Bi-Xenon headlamps

Copy templates 3 and 4. Check the measurements to ensure they are correct. Transfer the template to a self-adhesive, waterproof material and cut it out.

Position the templates so that the arrows point towards the centre and the dots on the templates match the dots on the headlamp lenses. The template marking > < should be aligned with the line on the headlamp lens.

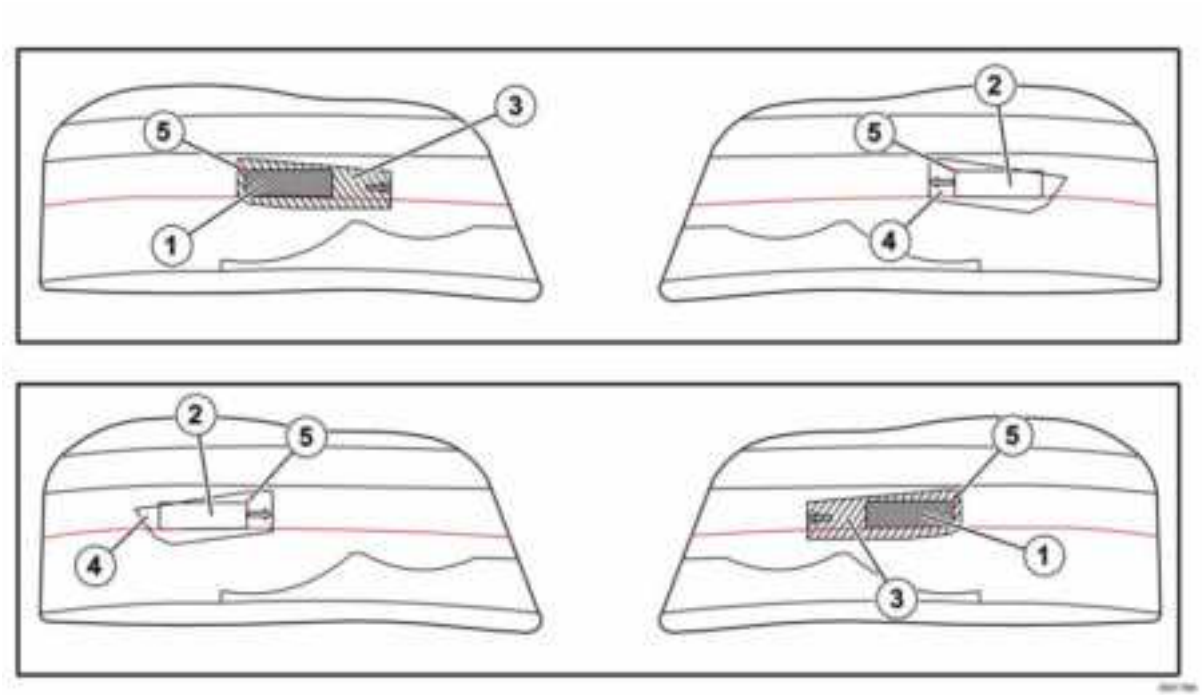
Reference measurements template 3:
The line between the > < markings on the templates should be approx. 140 mm.

Reference measurements template 4:

The line between the > < markings on the templates should be approx. 112 mm.

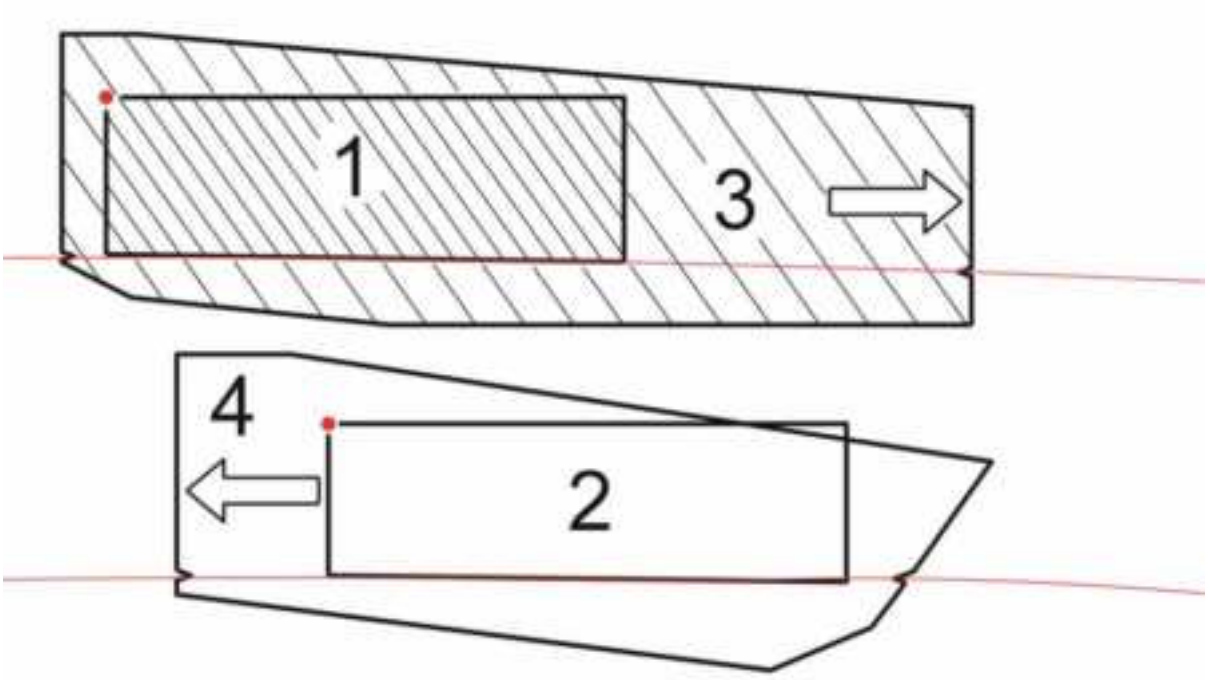
Adjusting headlamp pattern for Active Bi-Xenon Lights ABL see page 49.

Adjusting headlamp pattern



Fitting the mask to the headlamps. The upper illustration is for LHD variants and the lower illustration is for RHD variants. Templates 1 and 2 are for halogen headlamps, 3 and 4 are for Bi-Xenon headlamps.

Adjusting headlamp pattern



General 152
Tyre pressure 155
Warning triangle and spare wheel 157
Changing wheels 160
Tyre pressure monitoring (option) 162
Emergency puncture repair 164

WHEELS AND TYRES



07

General

Driving characteristics and tyres

The tyres greatly affect the car's driving characteristics. The type of tyre, dimensions, tyre pressure and speed rating are important for how the car performs.

When changing tyres, ensure that tyres of the same type and dimensions, and preferably also the same make, are fitted to all four wheels. Follow the recommended tyre pressures specified on the tyre pressure label, see page 155.

Designation of dimensions

The dimensions are stated on all car tyres. Example of designation: 225/70R16 102 H.

225	Section width (mm)
70	Ratio between section height and width (%)
R	Radial ply
16	Rim diameter in inches (")
102	Tyre load index (in this case 615 kg)
H	Speed rating (in this case 270 km/h).

Speed ratings

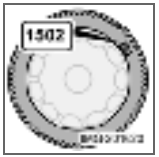
The car has "Whole Vehicle Type Approval", which means that dimensions and speed ratings must not differ from those specified on the vehicle's registration document. The only exception to these conditions is winter tyres (both those with studs and those without). If such a tyre is chosen, the car must not be driven faster than the speed rating of the tyre (for example, class Q can be driven at a maximum of 160 km/h).

Remember that traffic regulations determine how fast a car can be driven, not the speed class of the tyres.

Note! Maximum permitted speeds indicated.

Q	160 km/h (used only on winter tyres)
T	190 km/h
H	210 km/h
V	240 km/h
W	270 km/h
Y	300 km/h

New tyres



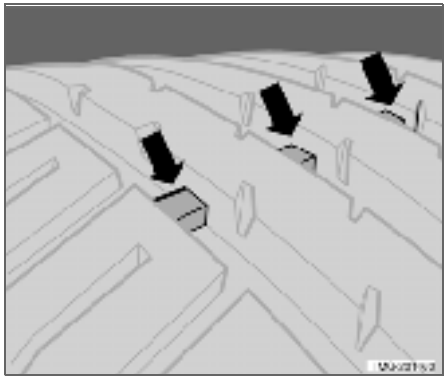
Tyres are perishable. After a few years they begin to harden at the same time as the friction capacity/characteristics gradually deteriorate. Therefore aim to get as fresh tyres as possible when you replace them. This is especially important with regard to winter tyres. The week and year of manufacture, the tyre's DOT marking (Department of Transportation), are stated with four digits, for example 1502. The tyre in the illustration was manufactured in week 15 of 2002.

Tyre age

All tyres older than six years should be checked by an expert even if they seem undamaged. The reason for this is that tyres age and decompose, even if they are hardly ever or never used. The function can therefore be affected due to the tyre's constituent materials being broken down. In such a case the tyre should then not be used. This also applies to spare tyres, winter tyres and tyres saved for future use. Examples of external signs which indicate that the tyre is unsuitable for use are cracks or discoloration.

The age of the tyre can be determined by the DOT marking, see illustration above.

More even wear and maintenance



The correct tyre pressure results in more even wear, see page 156. To achieve the best traction and more even wear on the tyres, the regular switching of the front and rear tyres with each other is recommended. The first change should be after 5000 km and then at intervals of 10000 km, this is to avoid differences in tread depth. Tyres with the greatest tread depth should always be fitted to the rear wheels to decrease the risk of skidding. Contact an authorised Volvo workshop if you are uncertain about tread depth.

Wheels should be stored lying down or hanging up, and not standing up.

Tyres with tread wear indicators

Tread wear indicators are narrow treadless bands across the width of the tread. On the side of the tyre are the letters TWI (Tread Wear Indicator). When the tyre's tread depth is down to 1.6 mm, the tread depth will be level in height with the tread wear indicators. Change to new tyres as soon as possible. Remember that tyres with little tread depth provide very poor grip in rain and snow.

Winter tyres

Volvo recommends winter tyres with particular dimensions. These are stated on the tyre pressure label, see page 155 for its location. The tyre dimensions are dependent on the engine variant. When driving on winter tyres, these must be fitted to all four wheels.

NOTE

Ask a Volvo dealer which rim and tyre types are most suitable.

Studded tyres

Studded winter tyres should be run in gently for 500–1000 km so the studs settle properly into the tyre. This gives the tyre, and especially the studs, a longer lifespan.

NOTE

The legal provisions for the use of studded tyres vary from country to country.

Tread depth

Road conditions with ice, slush and low temperatures place considerably higher demands on tyres than summer conditions. It is therefore not recommended to drive on winter tyres that have a tread depth of less than four mm.

Snow chains

Snow chains may only be used on the front wheels. This also applies to all-wheel-drive cars.

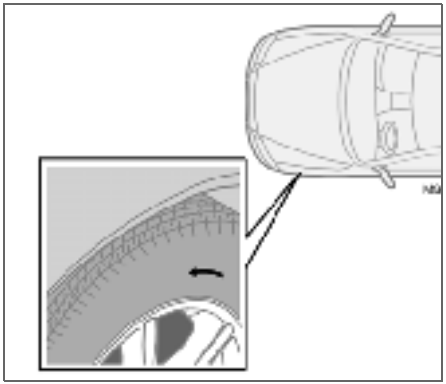
Never drive faster than 50 km/h with snow chains. Avoid driving on bare ground as this wears out both the snow chains and tyres. Never use quick-fit snow chains as the space between the brake discs and the wheels is too small .

IMPORTANT

Use Volvo genuine snow chains or equivalent chains designed for the correct car model, and tyre and rim dimensions. Consult an authorised Volvo workshop

General

Summer and winter wheels



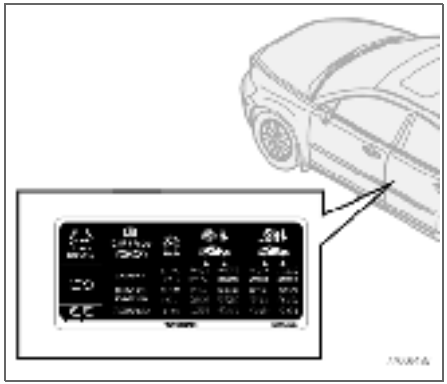
The arrow shows the tyre's direction of rotation

When summer and winter wheels are changed they should be marked with which side of the car they were mounted on, for example **L** for left and **R** for right. Tyres with a tread pattern which are designed to only turn in one direction have the direction of rotation marked with an arrow. The tyre should always rotate in the same direction throughout its lifespan. Tyres should only be switched between front and rear positions, never between left and right-hand sides, or vice versa. If the tyre is mounted incorrectly, the car's braking characteristics and capacity to force rain, snow and slush out of the way are adversely affected. Tyres with the greatest tread depth should always be fitted to the rear of the car (to decrease the risk of skidding.)

Wheels should be stored lying down or hanging up, and not standing up.

Contact an authorised Volvo workshop if you are uncertain about tread depth.

Recommended tyre pressure



The tyre pressure label on the driver's side door pillar shows which pressures the tyres should have at different loads and speed conditions.

Stated on the decal:

- Tyre pressure for the car's recommended wheel size
- ECO pressure
- Spare wheel pressure (Temporary Spare).

Checking the tyre pressure

Check the tyre pressure regularly.

NOTE

Tyre pressure decreases over time, this is a natural phenomenon. Tyre pressure also varies depending on ambient temperature.

Even after several kilometres of driving the tyres warm up and the pressure increases, so air must not be released if the pressure is checked when the tyres are warm, while the pressure must be increased if it is too low. Inadequately inflated tyres adversely affect fuel consumption, tyre lifespan and the car's roadholding. Driving on tyres with tyre pressure that is too low can also result in the tyres overheating and disintegrating.

For information on the correct tyre pressure, refer to the tyre pressure table on page 156. ("Cold tyres" means the tyres are the same temperature as the ambient temperature.)

Fuel economy, ECO pressure

At speeds under 160 km/h, the general tyre pressure for full load is recommended in order to obtain optimum fuel economy.

Tyre pressure affects travelling comfort, road noise and steering characteristics.

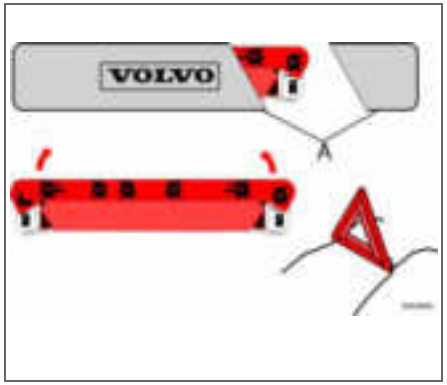
Tyre pressure

Tyre pressure table

Variant	Tyre size	Speed (km/h)	Load, 1-3 persons		Max. load	
			Front (kPa)	Rear (kPa)	Front (kPa)	Rear (kPa)
	225/70R16 235/65R17 235/60R18	0 – 160	220	220	270	270
		160+	220	220	270	270
	255/50R19	0–160	240	240	270	270
		160 +	240	240	270	270
All	All	0–160	270[1]	270[1]	270[1]	270[1]
Spare wheel Temporary Spare	T125/85R16 99M	0 – 80	420	420	420	420

[1]ECO pressure, see page 155

Warning triangle



Follow the regulations in force for the use of a warning triangle[1] in the country in which you are driving.

Use the warning triangle as follows:

- Detach the warning triangle case. It is held in place with a Velcro strap.
- Remove the warning triangle from its case (A).
- Fold out the four support legs on the warning triangle.
- Fold out both red sides of the warning triangle. Place the warning triangle in a location that is appropriate for the traffic situation.

After use:

- Pack everything in reverse order.

Make sure that the warning triangle with case is securely fastened in the compartment.

Spare wheel Temporary Spare

The spare wheel[2] is only intended to be used for the short time it takes to get the normal wheel replaced or repaired. Replace the spare wheel as soon as possible with a normal wheel. The car's handling may be altered by the use of the spare wheel.

By law, it is only legal to use the spare wheel/tyre temporarily in connection with damage to a tyre. A wheel/tyre of this type should be replaced with a normal wheel/tyre as soon as possible.

Remember also that this tyre combined with the normal tyres will affect driving characteristics. On four wheel drive vehicles excess speed may also damage the transmission.

Never drive faster than 80 km/h with a spare wheel on the car.

IMPORTANT

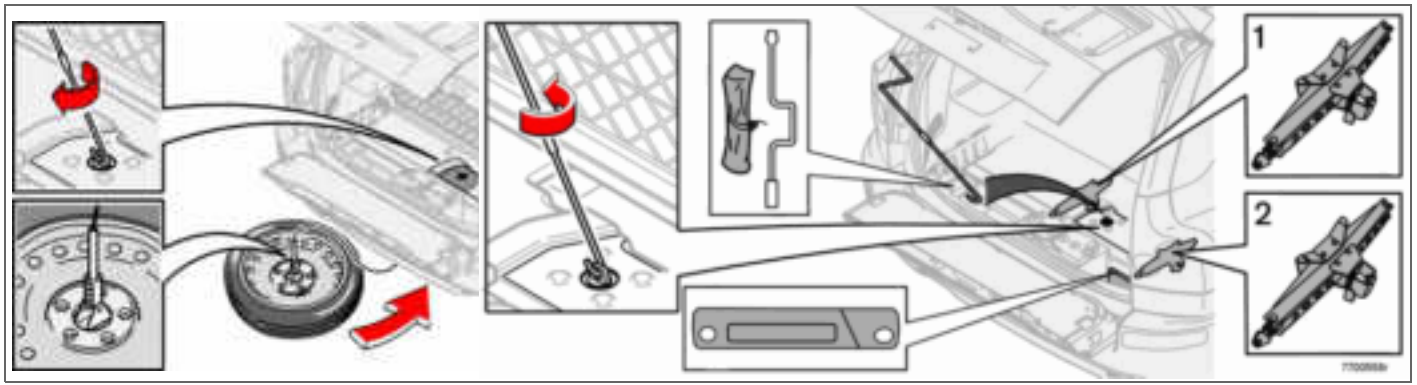
The car must never be driven fitted with more than one "Temporary Spare" wheel.

[1] Certain countries.

[2] Certain variants and markets

Warning triangle and spare wheel

Spare wheel – removing



The spare wheel is located under the car. The jack[1], tool kit[1] and crank are located under the floor hatch. The crank is in two parts. One part is in the tool kit and the other is under the tool kit.

NOTE

There is a puller spanner in the tool kit to remove the hub cap (certain wheel options).

The location of the jack depends on whether the car seats seven (1) or five (2).

[1] Certain variants and markets

Proceed as follows to release the spare wheel:

- Lower the bottom of the tailgate and lift up the floor hatch in the cargo area.
- Take the two parts of the crank and assemble.
- Fit the crank in the winch.
- Loosen the tyre by cranking anticlockwise until you reach the stop.
- Release the wheel from the cable and rewind up the cable clockwise.

NOTE

The cable could damage the car if it hangs free while driving.

- Place the punctured tyre in the cargo area. The tool kit contains a plastic bag for the tyre.

NOTE

The spot under the car is only intended for the car's original spare wheel. Do not place any other wheels there.

Spare wheel – refitting

It is best to have two people put the spare wheel back in place. One person to crank and the other to guide the wheel.

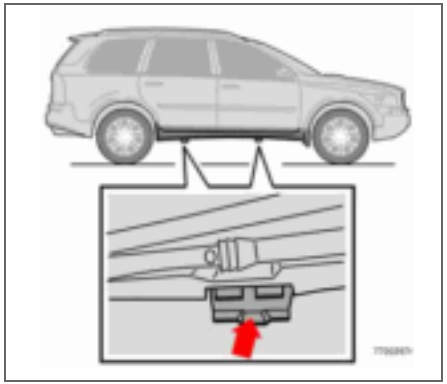
- Crank out the cable and place its anchor in the centre hole of the wheel.
- Slowly crank (clockwise) the cable in a bit.
- Angle the wheel so that it comes in over the exhaust system.
- Hold down the rear edge of the wheel while cranking it in.
- Place the wheel above the rear axle, against the floor.
- Crank to the stop point.
- Check that the wheel is properly secured.

WARNING

Check that the right mounting points are being used. A production anchorage with pin is located between the jacking points. This is not strong enough to use to lift the car. If you are unsure about the location of the jacking points, contact an authorised Volvo workshop. An incorrectly fitted jack could damage the door and body.

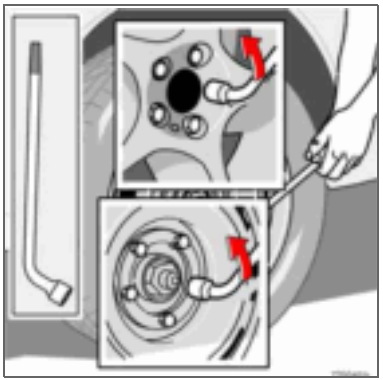
Changing wheels

Removing wheels



Remember to set out the warning triangle if you must change a wheel in a trafficked area. There are two jacking points on each side of the car, centred under the bottom of the doors.

- Park the car on an even, firm surface with no incline.
- Apply the parking brake and engage 1st gear (manual gearbox) or move the gear selector to the P position (automatic gearbox). Place chocks on either side of the wheels remaining on the ground - use stones or wooden blocks for example.
- Take out the jack, wheel brace and crank, see location page 158.
- Use the wheel brace to loose the wheel bolts ½-1 turn. Turn anticlockwise.



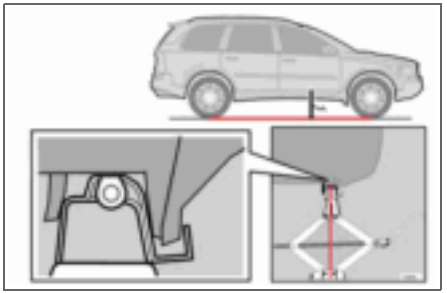
WARNING

Never crawl under the car when it is raised on a jack! The car could fall, causing injuries.

The car's original jack should only be used when changing wheels. All other work on the car should be done using workshop jacks and axle stands under the part of the car that is raised.

The jack screw should be kept well lubricated.

If the surface is too soft, the jack could slide to the side and the car could fall. No one should be in the car when the wheel is being changed.



- Place the jack under the jacking point and crank it up towards the car floor. Check that the jack sits securely in the anchorage. Then adjust the jack so that its foot is positioned vertically under the anchorage. See illustration. Do not place wood blocks or the like under the jack as you will not achieve full bearing capacity.

WARNING

If the jack is positioned incorrectly, the car could fall. Risk of injury.

- Lift the car until the wheel is free.
- Remove the wheel bolts and lift off the wheel.

Fitting the wheel

- Clean the contract surfaces on the wheel and hub.
- Fit the wheel. Screw the wheel nuts.
- Lower the car so that the wheel cannot rotate.
- Tighten the wheel bolts alternately and in torque steps. Tightening torque: 140 Nm (14.0 kpm). It is important that they are tightened to the correct torque. Check with a torque wrench.
- Screw the jack all the way down before returning it to the cargo area. Then secure it in place.
- Check that the new tyre has the correct amount of pressure.

NOTE

There are two different types of wheel bolts depending on whether or not your car has steel or aluminium rims; bolts used with aluminium rims have a loose, rotating ring. Bolts used with steel rims have no rotating ring.

Make sure to use the correct type of bolt. If you are unsure, check with the nearest Volvo workshop.

IMPORTANT

If TPMS is specified then the tyres must be calibrated after fitting. Read "Adjusting tyre pressure", see page 162.

Tyre pressure monitoring (option)

General

Tyre pressure monitoring, TPMS (Tyre Pressure Monitoring System) warns the driver when the pressure is too low in one or more of the car's tyres. It uses sensors located inside the air valve in each wheel. When the car is driven at approximately 40 km/h the system detects the tyre pressure. If the pressure is too low then a warning lamp on the dashboard illuminates and a message is shown in the information display.

Always check the system after changing a wheel in order to ensure that replacement wheels work with the system.

For information on correct tyre pressure, see page 155 and 156.

The TPMS system does not replace normal tyre maintenance.

IMPORTANT

If a fault should arise in the tyre pressure system a warning lamp on the dashboard will illuminate. The message **TYRE PRESS. SYST SERVICE REQUIRED** will be shown. This can be for various reasons, e.g. fitting a wheel not equipped with a sensor adapted for Volvo's tyre pressure monitoring system.

Adjusting tyre pressure monitoring

Tyre pressure monitoring can be adjusted in order to follow Volvo's tyre pressure recommendations, when driving with a heavy load for example.

NOTE

The engine must not be running.

– Inflate the tyres to the required pressure.
– Select key position **I** or **II**.
– Turn the thumbwheel on the left-hand stalk switch until the text **TYRE PRESSURE CALIBRATION** is shown in the information display.
– Press and hold the **RESET** button until the text **TYRE PRESSURE CALIBRATED** is shown.

Rectifying low tyre pressure

When the message **LOW TYRE PRESS. CHECK TYRES** is shown in the information display:

– Check the tyre pressure in all four tyres.
– Inflate the tyre(s) to the correct pressure.
– Drive the car for at least 1 minute in total at at least 40 km/h and check that the message disappears.

Deactivating tyre pressure monitoring

NOTE

The engine must not be running.

– Key position **I** or **II**.
– Turn the thumbwheel on the left-hand stalk switch until the text **TYRE PRESS. SYST ON** is shown in the information display.
– Press and hold the **RESET** button until the text **TYRE PRESS. SYST** OFF is shown.

To reactivate the system repeat the same steps 1–3, so that **TYRE PRESS. SYST ON** is shown in the information display.

Recommendations

Only factory fitted wheels are equipped with TPMS sensors in the valves.

- The temporary spare wheel does not have this sensor.
- If wheels without TPMS sensors are used then **TYRE PRESS. SYST SERVICE REQUIRED** will be shown every time the car is driven faster than 40 km/h for more than 10 minutes.
- Volvo recommends that TPMS sensors are fitted to all wheels on the car (summer and winter wheels).

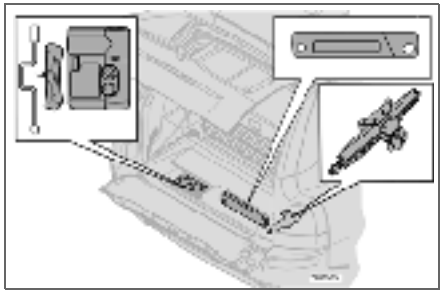
- Volvo recommends that sensors are not moved between different wheels.

WARNING

When inflating a tyre equipped with TPMS, hold the nozzle of the pump directly against the valve to avoid damaging the valve.

Emergency puncture repair

General



Cars seating five, the illustration shows variant 1 of the emergency puncture repair kit

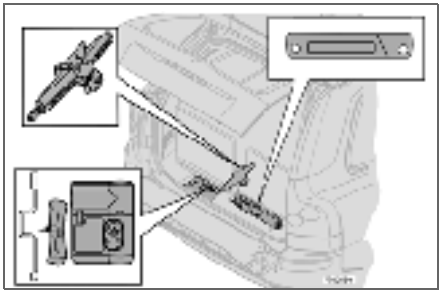
The emergency puncture repair kit with compressor and tools are found under the floor in the cargo area.

NOTE

The car can be supplied with two different types of emergency puncture repair kit. They are each described individually and are named **variant 1** and **variant 2**.

NOTE

The jack is an option on cars equipped with emergency puncture repair kit.



Cars seating seven, the illustration shows variant 1 of the emergency puncture repair kit

The emergency puncture repair kit[1] is used to seal the puncture and to check and adjust the tyre pressure. It consists of a compressor and a bottle with sealing fluid. The kit works as a temporary repair. The sealing fluid bottle must be replaced before its expiration date and after use. For information on replacement, see page 168 for variant 1 or page 172 for variant 2.

The sealing fluid effectively seals tyres punctured in the tread.

[1] Certain variants and markets.

NOTE

The emergency puncture repair kit is only intended for sealing tyres with a puncture in the tread.

The emergency puncture repair kit has limited abilities to seal tyres which have punctures in the wall of the tyre. Do not seal tyres with the emergency puncture repair kit if they have larger slits, cracks or similar damage.

12 V sockets for the compressor are located by the centre console in the front, by the rear seat and in the cargo area. Choose the electrical socket that is nearest the punctured tyre.

WARNING

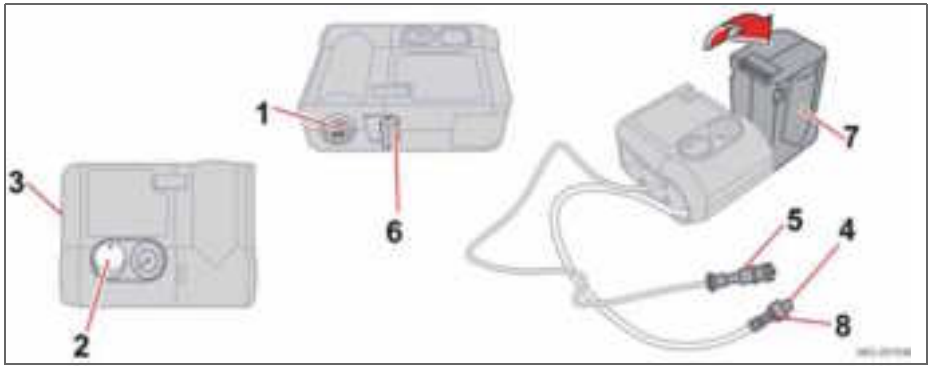
You should not drive faster than 80 km/h after the emergency tyre repair kit has been used. The temporarily sealed tyre must be changed as soon as possible (maximum driving distance: 200 km).

Taking out the emergency puncture repair kit

– Fold away the rear edge of the floor mat, forward from the back.
– Lift up the emergency puncture repair kit.

Variant 1

Inflating tyres



Set up the warning triangle if a tyre must be inflated in an area close to traffic.

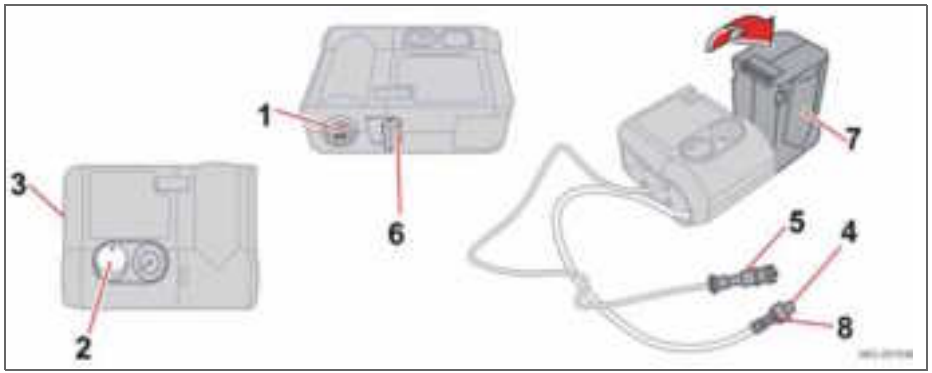
- Ensure that the orange switch (2) is in position **0** and take out the lead (5) and air hose (4) from the side compartment (3).
- Screw the air hose's valve connection to the bottom of the thread on the tyre's air valve.
- Connect the lead (5) to one of the car's 12 V sockets.
- Start the engine. The car must be in a well-ventilated place.
- Start the compressor by flicking the switch (2) to position **I**.
- Pump up the tyre to the pressure specified on the tyre pressure label.
- Switch off the compressor, the switch (2) should be in position **0**. Detach the air hose and unplug the lead. Replace the valve's dust cap.
- Put the lead (5) and air hose (4) into the side compartment (3).
- Put the puncture repair kit back under the floor in the cargo area.
- The compressor should not run for more than ten minutes at a time. Let it cool afterwards as there is a risk of overheating.
- Objects with a volume of up to 50 litres can be pumped up with the compressor.

WARNING

Inhaling car exhaust fumes can result in danger to life. Never leave the engine running in sealed areas or areas that lack sufficient ventilation.

Emergency puncture repair

Sealing punctured tyres



Set up the warning triangle if emergency tyre repairs must be carried out in an area where there is other traffic.

- Remove the decal (1) regarding the highest permitted speed from the emergency puncture repair kit and stick it on the steering wheel where it can be clearly seen by the driver.
- Ensure that the orange switch (2) is in position **0** and take out the lead (5) and air hose (4) from the side compartment (3).
- Screw the air hose's valve connection to the bottom of the thread on the tyre's air valve.
- Connect the lead (5) to one of the car's 12 V sockets.
- Release the safety catch (6) and turn the orange-coloured part (7) 90 degrees to the vertical position, until a click is heard.
- Start the engine. The car must be in a well-ventilated place.

WARNING

Inhaling car exhaust fumes can result in danger to life. Never leave the engine running in sealed areas or areas that lack sufficient ventilation.

- Start the compressor by flicking the switch (2) to position **I**. The pressure may increase temporarily up to a maximum of 4 bar while the sealing liquid is being pumped in. After about one minute, the pressure will drop and the pressure gauge will show a more correct tyre pressure.
- Inflate the tyre to a pressure of between 1.8 bar and 3.5 bar. If the pressure does not reach 1.8 bar after ten minutes of inflating, the compressor should be turned off so it does not overheat.

WARNING

Never stand next to the tyre when the compressor is running. Be particularly observant of the tyre walls. If cracks, irregularities or other damage appears, turn off the compressor immediately. Under these circumstances your journey should not continue. Contact an authorised tyre centre.

– Undo the air hose (4) from the air valve and put the dust cap back on. Unplug the lead (5) from the electrical socket. Fold the orange-coloured part (7) back into its original position and secure the catch (6). Keep the emergency repair kit in a safe place in the car.
– Immediately drive about 3 km, at a maximum speed of 80 km/h, to allow the sealing fluid to seal the tyre well.

WARNING

You should not drive faster than 80 km/h after the emergency tyre repair kit has been used. The temporarily sealed tyre must be changed as soon as possible (maximum driving distance: 200 km).

Check the tyre pressure again:

NOTE

Do not raise the orange-coloured part (7) when only the compressor is to be used for inflation.

– Connect the air hose (4) to the tyre's air valve. Connect the lead (5) to the 12 V socket. Read the pressure on the compressor. If the tyre pressure is below 1.3 bar, the tyre has not been sufficiently well sealed. Under these circumstances your journey should not be continued. Contact a tyre centre.
– If the tyre pressure is higher than 1.3 bar, the tyre should be pumped up to the pressure stated on the tyre pressure label, see page 155 for its location. Release pressure with the reduction valve (8) if the tyre pressure is too high.
– Switch off the compressor, the switch (2) should be in position **0**. Detach the air hose and unplug the lead. Replace the valve's dust cap.
– Put the lead (5) and air hose (4) into the side compartment (3).
– Put the puncture repair kit back under the floor in the cargo area.

IMPORTANT

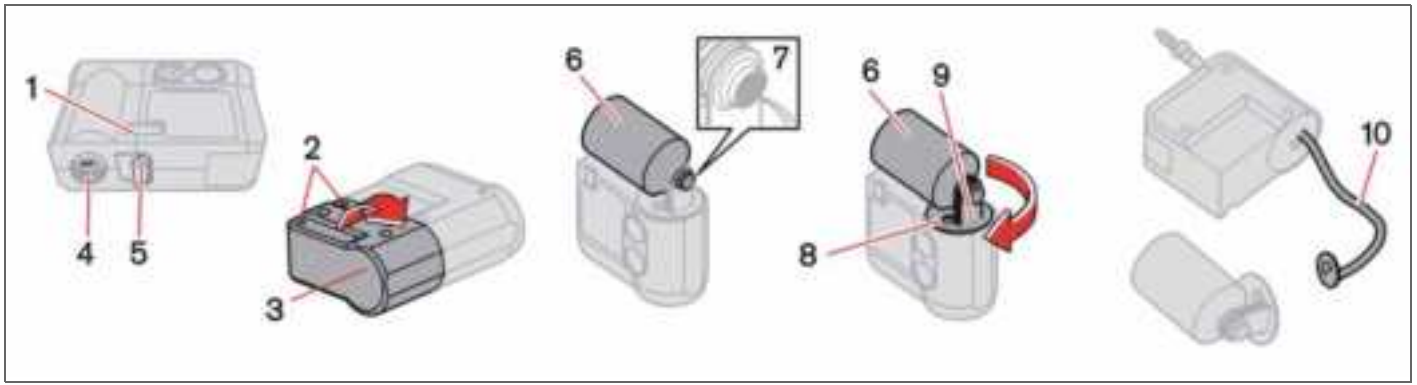
The compressor should not run for more than ten minutes at a time. Let it cool afterwards as there is a risk of overheating.

NOTE

The canister with sealant and hose should be replaced after use.

Emergency puncture repair

Changing the sealing fluid canister



The canister of sealing fluid should be replaced before the best-before date has expired, see date label (1), or after the tyre has been sealed. After use, the canister (6) with holder (8) and air hose (10) should be replaced.

This replacement can be carried out by an authorised Volvo workshop or by following the instructions.

IMPORTANT

Read the safety instructions on the bottom of the canister.

WARNING

Ensure the compressor is not connected to the 12 V socket when the canister is changed.

Replacing the canister before the expiration date has been reached

– Undo the two screws (2) on the orange-coloured case (3).
– Remove the speed label (4) and date label (1), and open the safety catch (5). Loosen the case (3) and take it off.
– Unscrew and remove the canister (6).
– Check that the seal (7) on the new canister is not damaged. Screw the canister into place.
– Refit the case (3). Check that the case is correctly fitted. Screw it on with the screws (2).
– Affix the speed label (4) and new date label (1) to the tyre repair kit.

Treat the removed canister as hazardous waste.

Changing the canister and hose after use

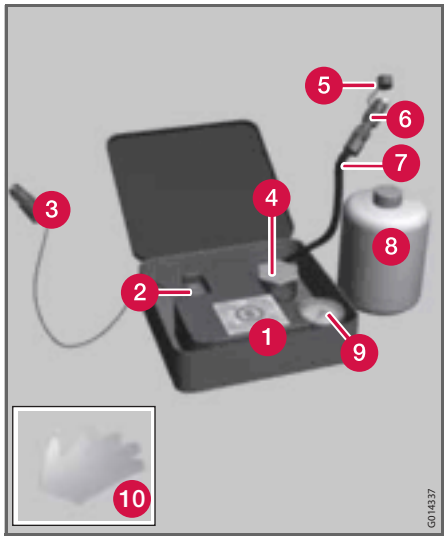
- Undo the two screws (2) on the orange-coloured case (3).
- Remove the speed label (4) and date label (1), and open the safety catch (5). Loosen the case (3) and take it off.
- Push down the button (8) while turning the canister (6) and the holder (9) clockwise. Remove them.
- Pull out the air hose (10).
- Wipe off remaining sealing fluid with a rag or scrape it away if it is has already dried.
- Fit a new air hose (10). Check that it is fitted correctly.
- Check that the seal (7) on the new canister is not damaged. Screw the holder (9) onto the canister (6) and turn it anticlockwise until a click is heard.
- Refit the case (3). Check that the case is correctly fitted. Screw it on with the screws (2).
- Affix the speed label (4) and new date label (1) to the tyre repair kit.

The empty canister and air hose can be treated as normal waste.

Emergency puncture repair

Variant 2

Overview



1. Decal, maximum permitted speed
2. Switch
3. Cable
4. Bottle holder (orange cap)
5. Protective cap
6. Pressure reducing valve
7. Air hose
8. Sealing fluid bottle
9. Pressure gauge
10. Gloves

Inflating the tyres

The car's original tyres can be inflated by the compressor.

1. The compressor must be switched off. Make sure that the switch is in position **0** and locate the cable and air hose.
2. Unscrew the wheel's dust cap and screw in the air hose valve connection to the bottom of the thread on the tyre's air valve.
3. Connect the cable to one of the car's 12 V sockets and start the car.

WARNING

Inhaling car exhaust fumes can result in danger to life. Never leave the engine running in enclosed areas or areas that lack sufficient ventilation.

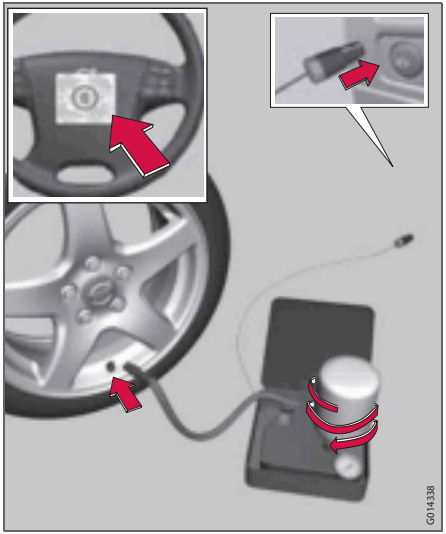
4. Start the compressor by flicking the switch to position **I**.
5. Inflate the tyre to the pressure specified on the tyre pressure decal. (Release air using the pressure reducing valve if the tyre pressure is too high.)

IMPORTANT

Risk of overheating. The compressor must not run for more than 10 minutes.

6. Switch off the compressor. Detach the air hose and cable.
7. Refit the dust cap.

Sealing punctured tyres



For information on the function of the parts, please refer to the illustration on page 170.

1. Open the lid of the emergency puncture repair kit.
2. Detach the decal for maximum permitted speed and affix it to the steering wheel.
3. Check that the switch is in position **0** and locate the cable and the air hose.
4. Put on the gloves.

WARNING

The sealing fluid can irritate the skin. In the case of contact with skin, wash away the fluid with soap and water.

5. Unscrew the orange cap and unscrew the bottle's stopper.

NOTE

Do not break the bottle seal. The seal is broken when the bottle is screwed in.

6. Screw the bottle into its holder.

IMPORTANT

Do not unscrew the bottle from its holder after use as surplus fluid could run out.

7. Unscrew the wheel's dust cap and screw in the air hose valve connection to the bottom of the thread on the tyre's air valve.
8. Plug the cable into the 12 V socket and start the car.
9. Flick the switch to position **I**.

WARNING

Never stand next to the tyre when the compressor is running. If cracks or unevenness arise then the compressor must be switched off immediately. The journey should not be continued. Contact an authorised tyre centre.

NOTE

When the compressor starts the pressure can increase up to 6 bar but the pressure drops after approximately 30 seconds.

10. Inflate the tyre for 7 minutes.

IMPORTANT

Risk of overheating. The compressor must not run for more than 10 minutes.

11. Switch off the compressor to check the pressure on the pressure gauge. Minimum pressure is 1.8 bar and maximum is 3.5 bar.

WARNING

If the pressure is below 1.8 bar then the hole in the tyre is too big. The journey should not be continued. Contact an authorised tyre centre.

Emergency puncture repair

12. Switch off the compressor and unplug the cable from the 12 V socket.
13. Detach the hose from the tyre valve and fit the valve cap.
14. As soon as possible drive approximately 3 km at a maximum speed of 80 km/h so that the sealing fluid can be distributed and seal the tyre.

Rechecking the repair and pressure

1. Reconnect the equipment.
2. Read the tyre pressure on the pressure gauge.

- If it is below 1.3 bar then the tyre is insufficiently sealed. The journey should not be continued. Contact a tyre centre.
- If the tyre pressure is higher than 1.3 bar, the tyre must be inflated to the pressure specified on the tyre pressure decal. Release air using the pressure reducing valve if the tyre pressure is too high.

3. Switch off the compressor. Detach the air hose and cable. Refit the dust cap.

NOTE

To avoid splashes, leave the bottle in its holder.

4. Return the emergency puncture repair kit to the cargo area.

NOTE

The sealing fluid bottle and hose must be replaced after use. Replacement must be performed by an authorised Volvo workshop.

WARNING

Check the tyre pressure regularly.

Drive to the nearest authorised Volvo workshop to replace the damaged tyre. Advise the workshop that the tyre contains sealing fluid.

WARNING

You should not drive faster than 80 km/h after the emergency puncture repair kit has been used. The temporarily sealed tyre must be changed as soon as possible (maximum driving distance: 200 km).

Replacing the sealing fluid canister after the expiration date.

Replace the bottle when the expiration date has passed. Treat the old bottle as environmentally hazardous waste.

IMPORTANT

Read the safety instructions on the bottom of the bottle.

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CAR CARE



08

Cleaning

Washing the car

Wash the car as soon as it becomes dirty. Use car shampoo. Dirt and road salt can lead to corrosion.

- Do not park the car in direct sunshine. Washing a car with hot paintwork can cause permanent paintwork damage. Wash the car in a car wash with waste water separator.
- Thoroughly rinse dirt off the underbody of the car.
- Rinse the entire car to remove loose dirt. When using a pressure washer: Make sure that the nozzle of the pressure washer is not closer than 30 cm to the bodywork. Do not spray directly at the locks.
- Wash using a sponge, car shampoo and plenty of lukewarm water.
- If the dirt is difficult to dislodge, wash the car using a cold degreasing agent.
- Dry the car using a clean, soft chamois or a water scraper.
- Clean the wiper blades with a lukewarm soap solution or car shampoo.

WARNING

Always have the engine cleaned by a workshop. There is a risk of fire if the engine is hot.

NOTE

Outside lighting such as headlamps, fog lamps and rear lamps may temporarily have condensation on the inside of the lens. This is a natural phenomenon, all outside lighting is designed to withstand this. Condensation is normally vented out of the lamp when it has been switched on for a time.

Removing bird droppings

Wash bird droppings off the paintwork as soon as possible. Bird droppings contain chemicals that affect and discolour paintwork very quickly. This discoloration can only be removed by a specialist.

Automatic car washes

An automatic car wash is a simple and quick way of washing the car, but it can never replace a proper handwashing. The brushes of an automatic car wash cannot reach everywhere.

WARNING

Always test the brakes after washing the car to ensure that moisture and corrosion do not attack the brake pads and reduce braking performance.

IMPORTANT

Washing by hand is gentler to the paintwork than an automatic car wash. Paintwork is also more sensitive when it is new. For this reason, handwashing is recommended during the first few months with a new car.

Press the brake pedal lightly from time to time if driving for long periods in rain or slush. This heats and dries the brake pads. You should also do this when you begin driving in extremely damp or cold weather.

Exterior plastic parts

A special cleaning agent, available from Volvo dealers, is recommended for cleaning exterior plastic parts. Never use strong stain removers.

Polishing and waxing

Polish and wax the car if the paintwork is dull or to give the paintwork extra protection.

The car does not need to be polished until it is at least one year old. However, the car can be waxed during this time. Do not polish or wax the car in direct sunlight.

Wash and dry the car thoroughly before you begin polishing or waxing. Clean off asphalt and tar stains using Volvo tar remover or white spirit. More stubborn marks can be removed using fine rubbing paste designed for car paintwork.

Polish first with a polish and then wax with liquid or solid wax. Follow the instructions on the packaging carefully. Many preparations contain both polish and wax.

IMPORTANT

Paint treatment such as preserving, sealing, protection, lustre sealing or similar could damage the paintwork. Paintwork damage caused by such treatment is not covered by Volvo warranty.

Cleaning door mirrors and front door windows with water-repellent coating (option)

Never use products such as car wax, degreaser or similar on mirror/glass surfaces as this could ruin their water-repellent properties.

Take care when cleaning so as not to damage the glass surface.

To avoid damaging glass surfaces when removing ice – only use plastic ice scrapers.

There is natural wear of the water-repellent coating.

NOTE

Treatment with a special finishing agent available from Volvo dealers is recommended in order to maintain the water-repellent properties. This should first be used after three years and then each year.

Cleaning the interior

Treating stains on fabric upholstery

A special cleaning agent, available from Volvo dealers, is recommended for cleaning the fabric upholstery. Other chemicals can impair the fire retardant qualities of the upholstery.

IMPORTANT

Sharp objects and Velcro may damage the fabric upholstery.

Treating stains on leather upholstery

Volvo's leather upholstery is equipped with surface protection against dirt. Cleaning re-protects the leather but grease and dirt dissolves the surface protection. There is a comprehensive programme for the care and maintenance of leather upholstery. Volvo offers a leather product for cleaning and treating the upholstery by which means the leather regains its protective layer.

IMPORTANT

Never use strong solvents. Such products may damage fabric, vinyl and leather upholstery.

Cleaning

IMPORTANT

Note that materials with colour that runs when dry (new jeans, suede garments etc.) may discolour the upholstery material.

To achieve best results Volvo recommends cleaning and application of the protective cream two to four times per year.

Ask your Volvo dealer about Volvo's Leather care product

Washing instructions for leather upholstery

- Pour the leather cleaner on the dampened sponge and squeeze out a strong foam.
- Work the dirt away with gentle circular movements.
- Dab the sponge accurately on the stains. Allow the sponge to absorb the stain. Do not rub.
- Wipe off with soft paper or a cloth and allow the leather to dry completely.

Protective treatment of leather upholstery

- Pour a small amount of the protective cream on the felted cloth and massage in a thin layer of cream with gentle circular movements on the leather.
- Now allow the leather to dry for 20 minutes before use.

The leather has now been given improved protection against stains and a UV filter.

Treating spots on interior plastic parts and surfaces

A special cleaning agent, available from Volvo dealers, is recommended for cleaning interior plastic parts and surfaces. Do not scrape or rub spots. Never use strong stain removers.

Cleaning seatbelts

Use water and a synthetic detergent. A special textile cleaning agent is available from you Volvo dealer. Make sure the seatbelt is dry before allowing it to retract.

Paintwork

Paint is an important part of the car's rust-proofing and should therefore be checked regularly. To avoid the onset of rust, damaged paintwork must be rectified immediately. The most common types of paintwork damage are stone chips, scratches, and marks on the edges of wings and doors.

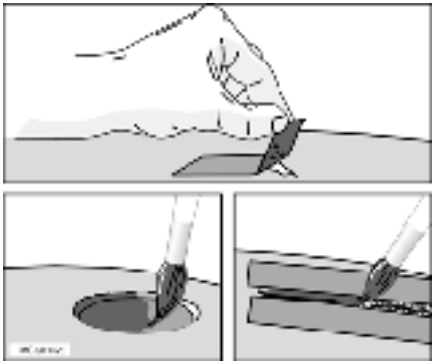
Colour code



Data plate

It is important that the correct colour is used. The colour code number (1) is shown on the data plate, see page 242.

Stone chips and scratches



Before touching up paintwork, the car must be clean and dry and at a temperature above 15 °C.

Materials

- Primer in a can
- Paint in a can or touch-up pen
- Brush
- Masking tape

Minor stone chips and scratches

If the stone chip has not penetrated to the bare metal and there is an undamaged colour coat, you can paint straight after cleaning the damaged area.

If the stone chip has penetrated to the bare metal

– Fasten a piece of masking tape over the damaged surface. Then remove the tape, removing any paint residue.
– Stir the primer well and apply using a fine brush or matchstick. Apply paint using a brush once the primer is dry.
– For scratches, proceed as above, but mask around the damaged area to protect the undamaged paintwork.
– After a few days, polish the touched-up areas. Use a soft rag and a small amount of lapping paste.

Rustproofing

Inspection and maintenance

Your car received a thorough and complete rustproofing at the factory. Parts of the body are made of galvanised sheet metal. The underbody is protected by a wear-resistant anti-corrosion compound. And, a thin, penetrating rustproofing fluid was sprayed into the members, cavities and closed sections.

Maintaining the car's rustproofing.

- Keep the car clean. Hose down the underbody. If using a pressure washer, keep the nozzle at least 30 cm from the painted surfaces.
- Regularly check and touch-up the rustproofing treatment as necessary.

The car's rustproofing does not normally require treatment for approximately12 years. After that time, it should be treated at three year intervals. If the car requires treatment, consult an authorised Volvo workshop.

Repair

If you want to repair the rustproofing yourself, make sure the area is clean and dry. Hose down, wash and dry the car thoroughly. Use a rustproofing agent in a spray can or one that is intended for brush application.

There are two different types of rustproofing agents:

- thin (colourless), for visible areas
- thick, for areas prone to wear on the underbody.

Possible repair areas with these agents:

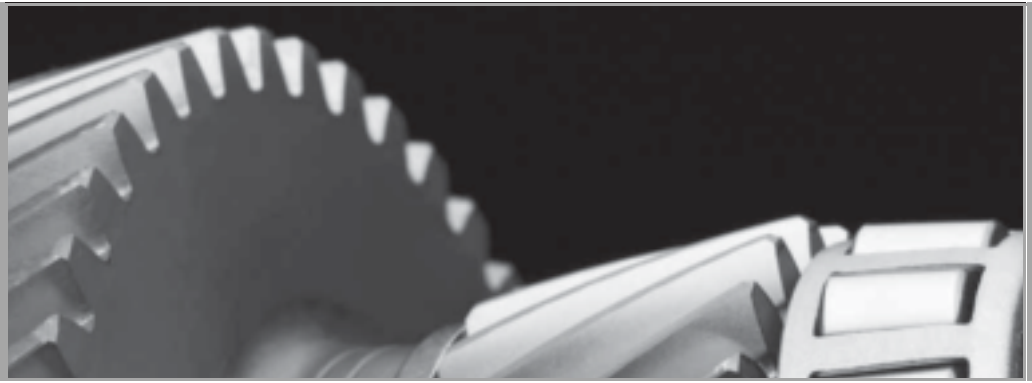
- Visible welds and sheet metal joints; thin fluid
- Underbody - thick fluid
- Door hinges - thin fluid
- Bonnet hinges and catch - thin fluid

Once you have finished treatment, excess rustproofing can be wiped off with a rag dipped in a recommended cleaning agent. Parts of the engine and suspension strut mountings in the engine compartment are treated at the factory with a wax-based, colourless rustproofing. This withstands normal detergents without dissolving and losing its rustproofing ability.

If you wash the engine using aromatic solvents, such as turpentine or white spirit (especially those that do not contain emulsifiers), the protective wax should be renewed after washing. Your Volvo dealer handles such waxes.

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MAINTENANCE AND SERVICE



09

Volvo service

Volvo service programme

Before the car left the factory, it was thoroughly test driven. It was checked again in accordance with Volvo Car Corporation regulations before it was handed over to you.

To keep your Volvo as safe and reliable as possible, follow the Volvo service programme specified in the Service and Warranty Booklet. Have an authorised Volvo workshop carry out service and maintenance work. Volvo workshops have the personnel, special tools and service literature to guarantee the highest quality of service.

IMPORTANT

For the Volvo warranty to apply, check and follow the instructions in the Service and Warranty Booklet.

Special service measures

Certain service measures, which affect the car's electrical system, can only be performed using electronic equipment specially developed for your car. Always contact an authorised Volvo workshop before beginning or performing service work that affects the electrical system.

Installing accessories

The incorrect connection and installation of accessories can negatively affect the car's electrical system. Certain accessories only function when the appropriate software has been programmed into the car's electrical system. Always contact an authorised Volvo workshop before installing accessories which are connected to or affect the electrical system.

Recording vehicle data

One or more of the computers in your Volvo are capable of recording detailed information. This information is intended for use in research to enhance safety and for diagnosing faults in some of the in-car systems. The data may include details regarding seatbelt use by the driver and passengers, the functions of various vehicle systems and modules, and status information about the engine, throttle, steering, brakes and other systems. This data can also include details of the way the car is driven. This type of information can include, without being limited to, specific details such as vehicle speed, the use of the brake and accelerator pedals and steering wheel position. This latter type of data can be stored for a limited period while the car is being driven and subsequently during a collision or a near-collision. Volvo Car Corporation will not disclose the stored information without consent. However, Volvo Car Corporation may be forced to disclose the information due to national legislation. Volvo Car Corporation and authorised Volvo workshops may also read and use the information.

Before starting work on the car

Battery
Check that the battery cables are correctly connected and tightened.

Never disconnect the battery when the engine is running (e.g. if replacing the battery).

Never use a quick charger to charge the battery. The battery cables must be disconnected when charging the battery.

The battery contains acid that is both corrosive and toxic. Handle the battery in an environmentally-suitable way. Let your Volvo dealer assist you.

WARNING

High voltage output from the ignition system. The voltage in the ignition system is dangerous. The ignition must therefore always be switched off for work in the engine compartment.

Do not touch the spark plugs or ignition coils when the ignition is on or the engine is hot.

Check regularly

Check the following at regular intervals, for example, when refuelling:

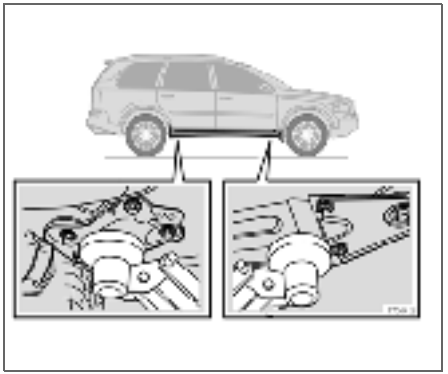
- Coolant – The level must be between the **MIN** and **MAX** marks on the expansion tank.
- Engine oil – The level must be between the **MIN** and **MAX** marks.
- Power steering fluid – The level must be between the **MIN** and **MAX** marks.
- Washer fluid – The reservoir should be well filled. Use washer antifreeze at temperatures around freezing.
- Brake and clutch fluid – The level must be between the **MIN** and **MAX** marks.

WARNING

Bear in mind that the radiator fan may start automatically some time after the engine has been switched off.

Always have the engine cleaned by a workshop. There is a risk of fire if the engine is hot.

Lifting the car



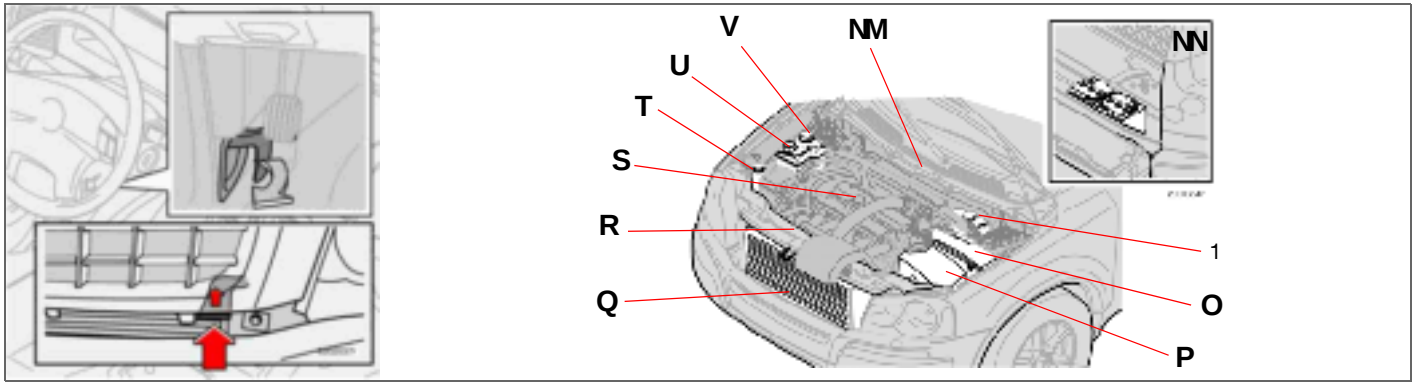
If the car is lifted with a workshop jack; position the jack with the front edge on the subframe.

Do not damage the splashguard under the engine. Ensure that the jack is positioned so that the car cannot slide off. Always use axle stands or the like.

If you lift the car using a two pillar workshop lift, ensure that the front and rear lift arms are fixed under the lifting points on the door sill. See the illustration.

Bonnet and engine compartment

Opening the bonnet



– Pull the handle on the far left (or right if the car is RHD) under the dashboard. You will hear when the lock releases.
– Insert your hand to the right under the front edge of the bonnet (below the grille).
– Press up the safety catch handle.
– Release the handle and open the bonnet.

WARNING

Check that the bonnet locks properly when closed.

Engine compartment

1. Clutch and brake fluid reservoir
2. Relay and fuses
3. Air filter. (The cover has a different design depending on engine variant.)
4. Radiator
5. Engine oil dipstick
6. Engine oil filling
7. Washer fluid reservoir
8. Power steering fluid reservoir
9. Expansion tank, cooling system
10. Chassis data plate
11. Battery (in cargo area)

Fuel system

Diesel engines are sensitive to contaminants. Only use diesel fuel from a well-known producers. Never use diesel of dubious quality, see page 249. Special diesel fuel designed for low temperatures around freezing point is also available from the major oil companies. This fuel is less viscous at low temperatures and reduces the risk of paraffin precipitate.

The risk of condensation in the fuel tank is reduced if the tank is kept well filled. When refuelling, check that the area around the fuel filler pipe is clean. Avoid spilling fuel onto the paintwork. Wash off any spillage with detergent and water.

Empty tank

No special procedures are required if the tank is run dry. The fuel system is bled automatically if the ignition switch is kept in position **II** for approx. 60 seconds before the start attempt.

IMPORTANT

Diesel type fuels which must not be used: special additives, Marine Diesel Fuel, fuel oil, RME (Rape Methyl Ester) and vegetable oil. These fuels do not fulfil the requirements in accordance with Volvo recommendations and generate increased wear and engine damage that is not covered by the Volvo warranty.

IMPORTANT

For model year 2006 or later the sulphur content must be a maximum of 50 ppm.

Draining condensation from the fuel filter

The fuel filter separates condensation from the fuel. Condensation can disrupt engine operation.

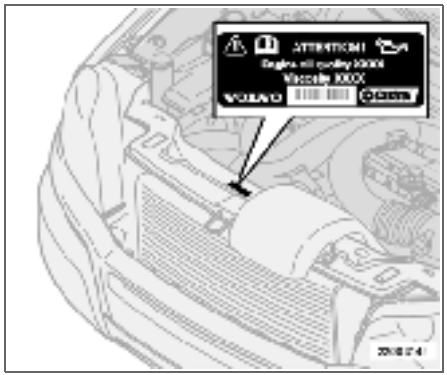
The fuel filter must be drained at the intervals specified in the Service and Warranty Booklet or if you suspect that the car has been filled with contaminated fuel.

IMPORTANT

Certain special additives remove the water separation in the fuel filter.

Oils and fluids

Engine compartment decal for oil grade



IMPORTANT

Always use oil of the prescribed grade, see the engine compartment decal. Check the oil level frequently and change the oil regularly. The engine will be damaged if lower grade oil is used or if the car is driven with the oil level too low.

Using oil of a higher than specified grade is permitted. Volvo recommends using an oil of a higher grade than that specified on the decal for adverse driving conditions. See page 245.

Checking the engine oil and oil filter

Volvo recommends Castrol oil products. Change the oil and replace the oil filter in accordance with the intervals specified in the Service and Warranty Booklet.

IMPORTANT

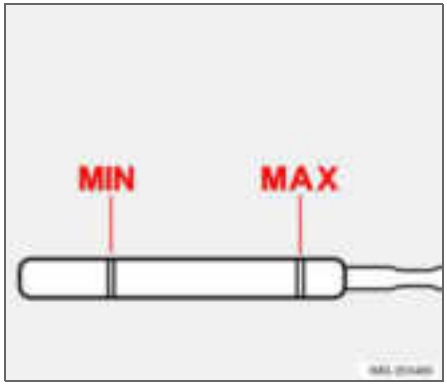
In order to fulfil the requirements for the engine's service intervals all engines are filled with a specially adapted synthetic engine oil at the factory. The choice of oil has been made very carefully with regard to service life, starting characteristics, fuel consumption and environmental impact. An approved engine oil must be used in order that the recommended service intervals can be applied. Only use a prescribed grade of oil (see the engine compartment decal) for both filling and oil change, otherwise you will risk affecting service life, starting characteristics, fuel consumption and environmental impact. Volvo Car Corporation disclaims all warranty liability if engine oil of the prescribed grade and viscosity is not used.

Volvo uses different systems for warning of low oil level or low oil pressure. Certain variants have an oil pressure sensor, and then a lamp is used for oil pressure. Other variants have an oil level sensor, and then the driver is informed via the warning symbol in the centre of the instrument unit as well as by display texts. Certain models have both variants. Contact an authorised Volvo dealer for more information.

Checking the oil level in a new car is especially important before the first scheduled oil change. The Service and Warranty Booklet specifies the odometer readings for oil changes.

Volvo recommends checking the oil level every 2 500 km. The most accurate measurements are made on a cold engine before starting. The measurement will be inaccurate if taken immediately after the engine is switched off. The dipstick will indicate that the level is too low because the oil has not had time to flow down into the oil sump.

Checking the oil



The oil level must be within the area marked on the dipstick

Checking the oil in a cold engine:

- Wipe the dipstick clean before checking the level.
- Check the oil level using the dipstick. The oil level must be between the **MIN** and **MAX** marks.
- If the level is close to the **MIN** mark, start by topping up with 0.5 litres of oil. Top up until the oil level is nearer the **MAX** than the **MIN** mark on the dipstick. See page 245–246 for capacities.

Checking the oil in a warm engine:

- Park the car on a level surface, switch off the engine and wait 10–15 minutes to allow the oil time to run back to the sump.
- Wipe the dipstick clean before checking the level.
- Check the oil level using the dipstick. The oil level must be between the **MIN** and **MAX** marks.

If the level is close to the **MIN** mark, start by topping up with 0.5 litres of oil. Top up until the oil level is nearer the **MAX** than the **MIN** mark on the dipstick. See page 245–246 for capacities.

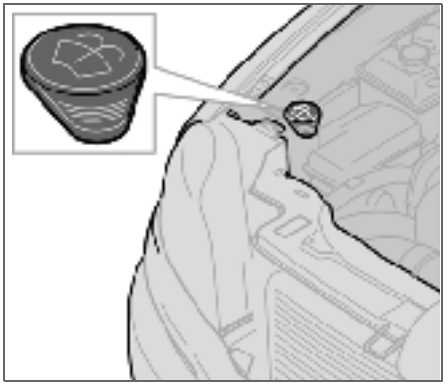
WARNING

Do not spill oil onto the hot exhaust manifold due to the risk of fire.

IMPORTANT

Never fill above the **MAX** mark. Oil consumption may increase if too much oil is poured into the engine.

Washer fluid, topping up



Location of washer fluid reservoir.

The windscreen and headlamp washers have the same reservoir. Add frost protection in the winter so that the fluid does not freeze in the pump, reservoir and hoses. See capacities on page 247.

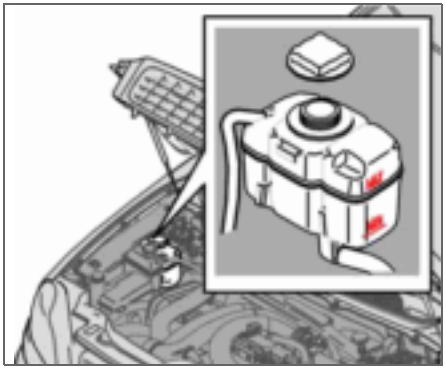
Add washer antifreeze during the winter so that the fluid does not freeze in the pump, reservoir and hoses.

NOTE

Mix the washer antifreeze and water before filling the reservoir.

Oils and fluids

Checking and topping up the coolant



When topping up the coolant, follow the instructions on the packaging. It is important that the mixture of coolant concentrate and water is correct for the prevailing weather conditions. Never top up with water only. The risk of freezing increases with both too little and too much coolant concentrate.

IMPORTANT

Always use coolant with anti-corrosion agent as recommended by Volvo. New cars are filled with coolant that can withstand temperatures down to approximately –35 °C.

See capacities on page 247.

Check the coolant regularly

The level should lie between the **MIN** and **MAX** marks on the expansion tank. If the system is not filled sufficiently, high local temperatures could occur, causing a risk of damage (cracks) to the cylinder head. Top up the coolant when the level falls to the **MIN** mark.

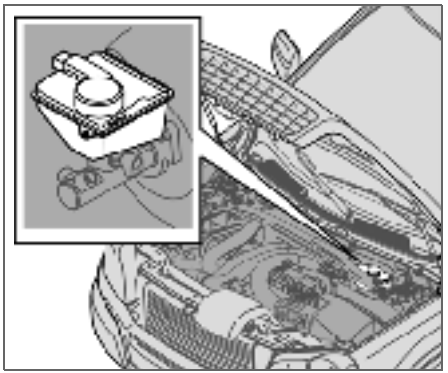
WARNING

The coolant may be very hot. If the coolant requires topping up when the engine is at operating temperature, unscrew the expansion tank cap slowly to gently release the overpressure.

NOTE

The engine must only be run with a well-filled cooling system. High temperatures can occur, causing a risk of damage (cracks) to the cylinder head.

Checking and topping up the brake and clutch fluid



The brake and clutch fluid have a common reservoir[1]. The fluid level must be between the **MIN** and **MAX** marks. Check the level regularly. Change the brake fluid every other year or at every other regular service.

See the capacities and recommended fluid grade on page 247.

The fluid should be changed annually on cars driven in conditions requiring hard, frequent braking, such as driving in mountains or tropical climates with high humidity.

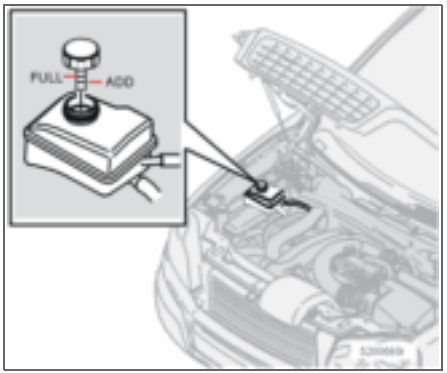
[1] Location dependent on whether car is left or right-hand drive.

WARNING

If the brake fluid is under the **MIN** level in the brake fluid reservoir, do not drive further before topping up the brake fluid.

The reason for the loss of brake fluid must be investigated.

Checking and topping up the power steering fluid



NOTE

Check the level frequently.

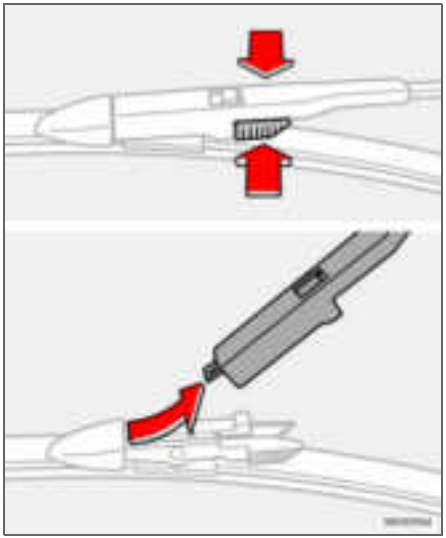
Check the level at every service. It is not necessary to change the fluid. The level must lie between the **ADD** and **FULL** marks. See the capacities and recommended grade on page 247.

NOTE

If a fault should arise in the power steering system or if the car is without power and must be towed, it can still be steered. However the steering will be much heavier than normal and it will require more effort to turn the wheel.

Wiper blades

Replacing the wiper blades



Changing

– Fold out the wiper arm and grasp the wiper blade.

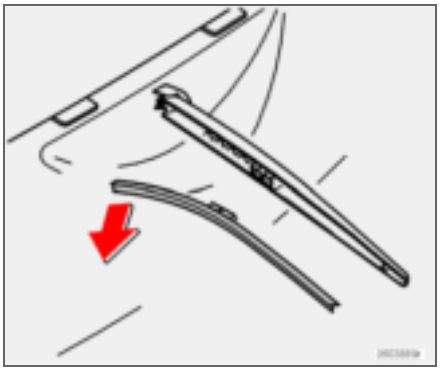
NOTE

The wiper blades are different lengths. The blade on the driver's side is longer than the blade on the passenger side.

– Press in the ribbed spring catch on the wiper blade while lifting it off at the arm extension.

– Fit the new blade in reverse order and check that it is properly secured.

Replacing the wiper blades, rear window



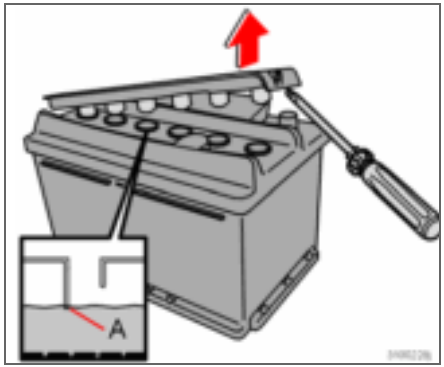
– Fold out the wiper arm.

– Remove the wiper blade by moving it up/out (see illustration) towards the tailgate.

– Press the new wiper blade into position.

– Check that the blade is firmly installed.

Battery care



There may be two different types of battery. They are fully interchangeable with each other.

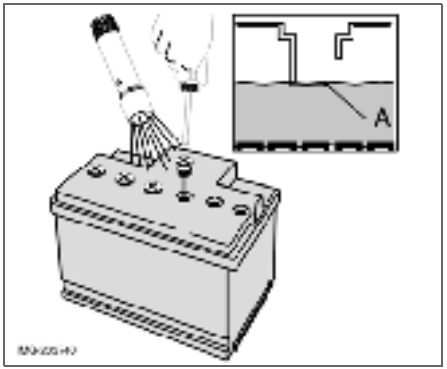
The service life and function of the battery is influenced by factors such as the number of starts, discharging, driving style, driving conditions and climatic conditions.

IMPORTANT

Always use distilled or deionised water (battery water).

NOTE

An expended battery must be recycled in an environmentally responsible manner as it contains lead.



For the battery to function satisfactorily:

- Regularly check that the electrolyte level is correct (**A**) and never fill above the level mark.
- Check all cells. Use a screwdriver to remove the cell caps (or the cover).
- If necessary, top up with distilled water to the battery's maximum mark.
- Fit the cell caps (or the cover) firmly.

WARNING

Batteries can generate oxyhydrogen gas, which is highly explosive. A spark, which can be generated if you connect the jump leads incorrectly, is sufficient to make the battery explode. The battery also contains sulphuric acid, which can cause serious burns. If the acid comes into contact with eyes, skin or clothing, flush with large quantities of water. If acid splashes into the eyes, seek medical advice immediately.

NOTE

The life of the battery is shortened if it becomes discharged repeatedly.

Battery

Symbols on the battery



Use protective goggles.



Further information in the owner's manual.



Store the battery out of the reach of children.



The battery contains corrosive acid.

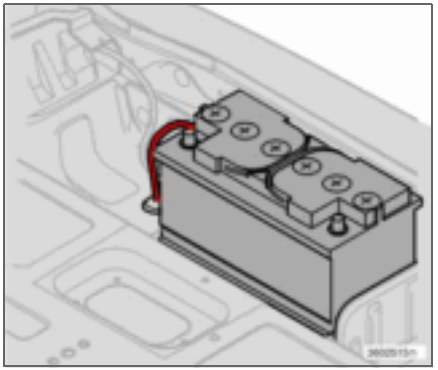


Avoid sparks and naked flames.



Risk of explosion.

Draining oxyhydrogen gas



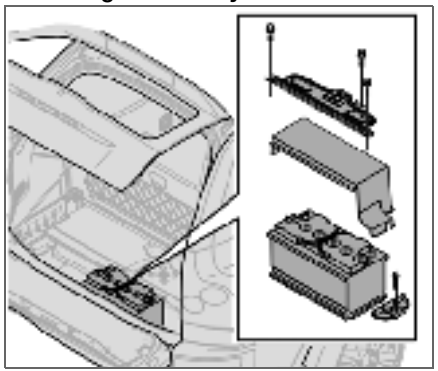
The battery can develop oxyhydrogen gas, which is highly explosive. An evacuation hose draws any oxyhydrogen gas from around the battery out of the car and prevents gas from accumulating in the passenger compartment and cargo area. If you must change the battery for some reason, it is imperative that the evacuation hose is connected to the new battery and that it is routed to the outlet in the bodywork.

WARNING

The battery contains oxyhydrogen, which is highly explosive. Be sure that the oxyhydrogen evacuation hose is correctly connected.

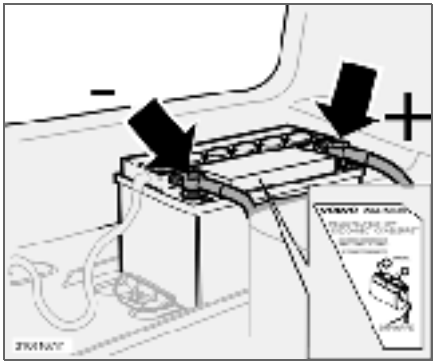
Changing the battery

Removing the battery



- Switch off the ignition and remove the key
- Unscrew the bracket and cover over the battery
- Wait at least 5 minutes before touching any electrical terminals. (This allows time for the information in your car's electrical system to be stored in the control modules.)
- Disconnect the negative lead first
- Then disconnect the positive lead and the evacuation hose for the oxyhydrogen gas

Fitting the battery



- Set the battery in place
- Connect the positive lead
- Connect the negative lead
- Make sure the evacuation hose is correctly connected to both the battery and the outlet in the bodywork.
- Refit the cover and bracket

Replacing bulbs

General

All bulb specifications are given on page 252.

The following list contains bulbs and point-source lamps that are specialised or unsuitable for changing except at a workshop:

- General interior lighting in the roof
- Reading lamps and glovebox lighting
- Indicator, door mirror and approach lighting
- High-level brake light
- Active Bi-Xenon and Bi-Xenon headlamps

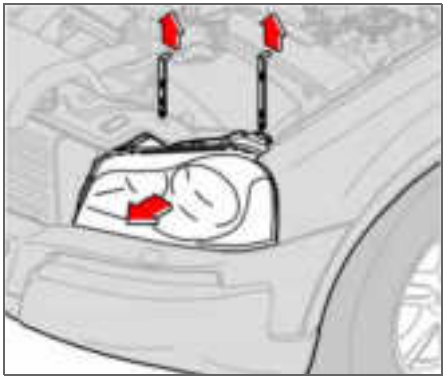
WARNING

On cars with Bi-Xenon headlamps, Xenon lamp replacement must be carried out by an authorised Volvo workshop. The headlamps must be handled with extreme care due to the high-voltage unit in the Xenon lamp.

IMPORTANT

Never touch the bulbs' glass with your fingers. Grease and oils from your fingers are vaporised by the heat, coating and damaging the reflector.

Changing front bulbs



The entire lamp insert must first be removed when replacing dipped beam, main beam and parking lamp bulbs. To replace one of these bulbs, do the following and then consult the instructions for the specific lamp.

Removing the lamp housing:

– Switch off all lights and turn ignition key to position **0**.

– Open the bonnet.

– Release the insert by pulling up the two lock pins holding it in place.

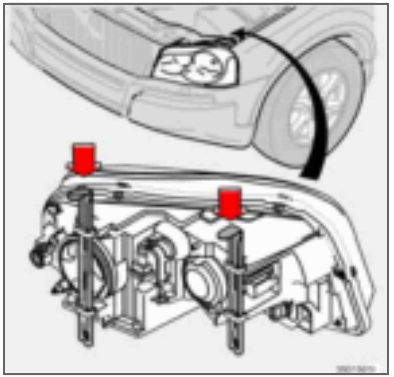
– Lift the insert straight out.

– Unplug the connector by first pressing in the catch from underneath and then pulling it up a bit from above.

IMPORTANT

Do not pull the electrical cable, only the connector

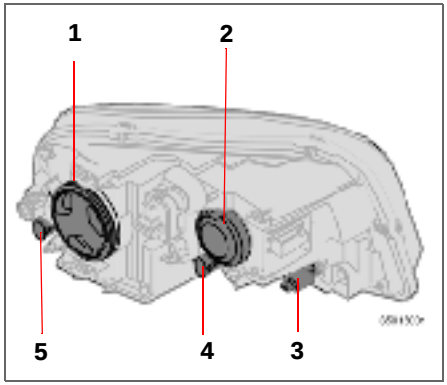
– Lift out the entire headlamp insert and place it on a soft surface so as not to damage the lens.



Refit the headlamp insert in reverse order. Check that the lock pins are correctly situated.

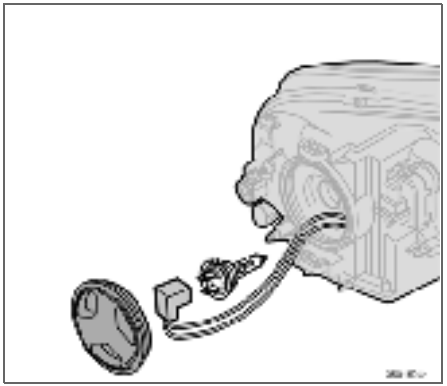
Replacing bulbs

Location of bulbs in front lamp



1. Dipped beam
2. Main beam
3. Direction indicator
4. Parking lamp
5. Side marker lamps

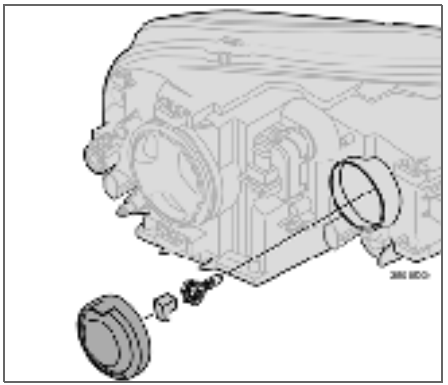
Dipped beam, halogen



– Undo the outer cover by turning it anti-clockwise.
– Unplug the connector.
– Disconnect the spring clamp. First push to the right so that the spring clamp disconnects, then out and down.
– Pull out the lamp.
– Fit the new bulb. It can only be fitted in one position.
– Press the clamp spring upwards and a little to the left so that it secures in its catch.
– Press the connector back in place.
– Screw the cover back into place; the marking **HAUT** should be at the top.

Main beam

Halogen and Bi-Xenon headlamps

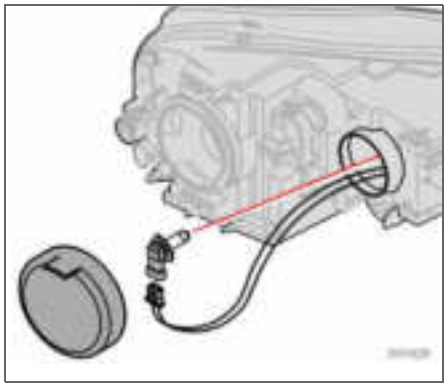


– Undo the outer cover by pulling it straight out and then unplug the connector.
– Disconnect the spring clamp. First push to the right so that the spring disconnects and then out and down.
– Pull out the lamp.
– Fit the new bulb. It can only be fitted in one position.
– Press the clamp spring upwards and a little to the left so that it secures in its catch.
– Press the connector back in place and refit the cover.

Replacing bulbs

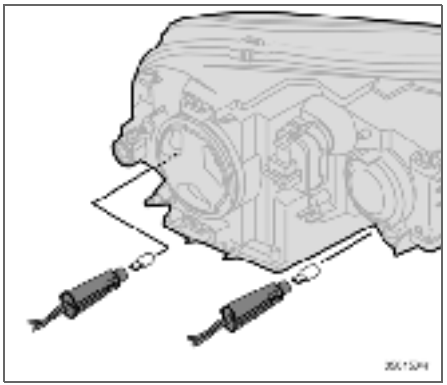
Main beam

Active Bi-Xenon headlamps



- Switch off all lights and turn ignition key to position **0**.
- Remove the cover.
- Turn the bulb anticlockwise and pull it out.
- Undo the connector by pressing the catch out and then pulling.
- Plug the connector into the bulb, a click is heard.
- Refit the bulb, turn it in position.
- Refit the cover.

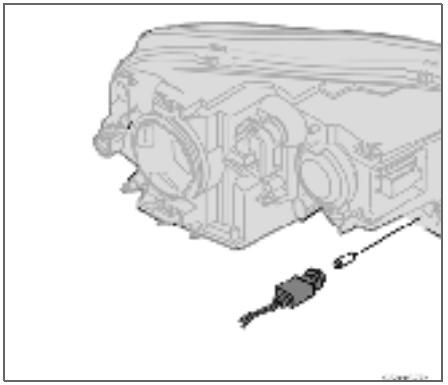
Side marker lamps and position/ parking lamps



The bulbs are housed in bayonet holders.

- Turn the bulb holder anticlockwise and remove.
- Pull the bulb straight out.
- Fit the new bulb by carefully pressing it into the recess.
- Fit the bulb holder back in place and turn clockwise.

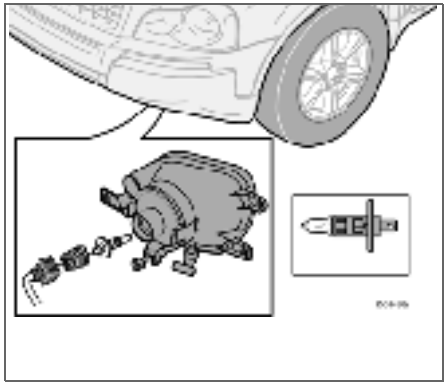
Direction indicators



The bulbs are housed in bayonet holders.

- Turn the bulb holder anticlockwise and remove.
- Press in the bulb, turn anticlockwise and remove.
- Fit the new bulb by pressing it into the recess and then turning clockwise.

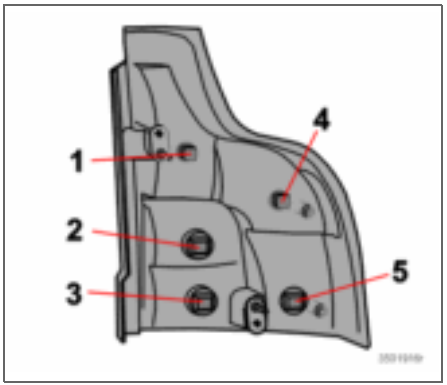
Fog lamps



- Switch off all lights and turn the ignition key to position **0**.
- Turn the bulb holder slightly anticlockwise.
- Remove the lamp.
- Put the new bulb in place. The profile of the bulb holder matches the one on the foot of the lamp.
- Refit the bulb holder by turning slightly clockwise. The **TOP** mark on the bulb holder must be upward.

Bulbs in rear lamp cluster

Bulb location

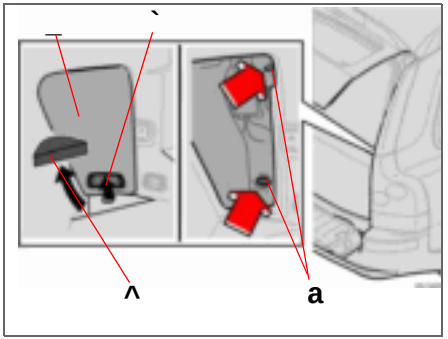


1. Position lamps
2. Direction indicators
3. Reversing lamp
4. Position lamps
5. Brake light

NOTE

If the error message **BULB FAILURE/ CHECK STOP LAMP** remains after a faulty bulb has been replaced then consult an authorised Volvo workshop.

Bulb replacement

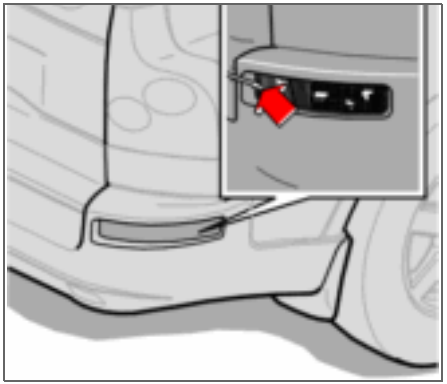


- Switch off all lights and turn ignition key to position **0**.
- Lower the bottom of the tailgate and open the floor hatch. (If the car is equipped with a grocery bag holder (option), undo the holder's retaining straps.)
- Remove the corner piece (**A**).
- Open the hatch (**B**) in the side panel by pulling the catch (**C**) up and towards you.
- Take spanner no. 10 out of the tool kit and undo the nuts (**D**).
- Pull the entire insert straight back.
- Loosen the extra length of cable for better accessibility.

Replacing bulbs

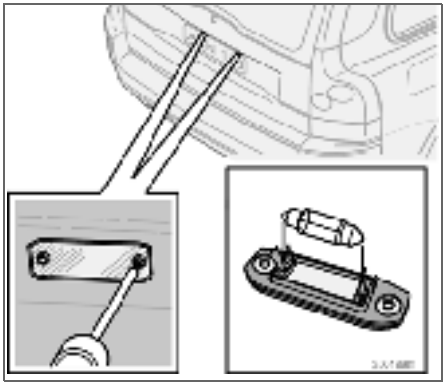
- Place the insert on a soft surface so as not to scratch the glass.
- Turn the bulb holder anticlockwise and pull it out.
- Turn the bulb anticlockwise to loosen it. (Applies to direction indicators, reversing lamps and brake lamps).
- Pull the bulb straight out. (Applies to position lamps).
- Replace the bulb.
- Refit the bulb holder in the recess and turn clockwise.
- Press back the extra length of cable.
- Refit the insert against the bolt holes. Press the insert into place.
- Tighten the nuts.
- Refit the side panel and corner piece.

Rear fog lamp



- Insert a slotted screwdriver as indicated by the arrow in the illustration.
- Prise out the lamp insert.
- Turn the bulb holder anticlockwise to loosen it.
- Turn the bulb anticlockwise and lift the bulb out.
- Replace the bulb.

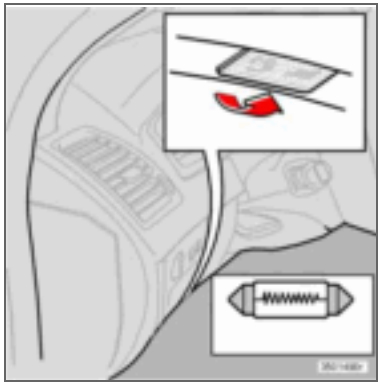
Number plate lighting



- Switch off all lights and turn the ignition key to position **0**.
- Remove the screws with a screwdriver.
- Loosen the whole lamp housing carefully and pull it out.
- Replace the bulb.
- Refit the entire lamp housing and screw it into place.

Replacing bulbs

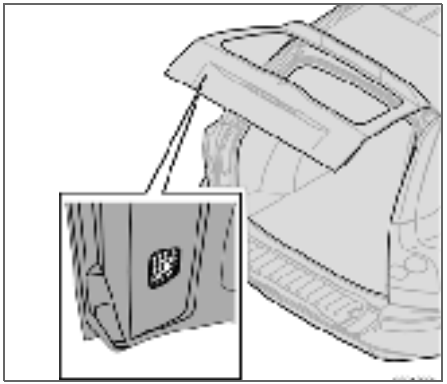
Courtesy lighting



There is courtesy lighting under the dashboard on the driver and passenger sides.

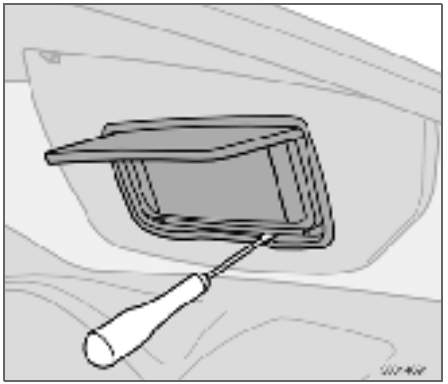
- Insert a screwdriver and gently turn so that the lens detaches.
- Remove the blown bulb.
- Fit a new bulb.
- Refit the lens.

Bulbs in the cargo area



- Insert a screwdriver and gently turn so that the lamp housing comes loose.
- Remove the blown bulb.
- Replace the bulb. Check that the bulb lights.
- Refit the lamp housing.

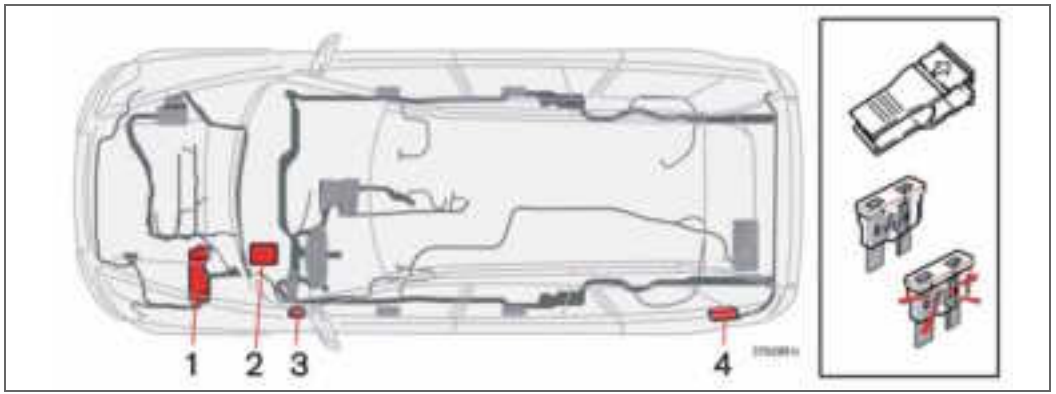
Vanity mirror lighting



- Insert a slotted screwdriver at the side of the centre clip in the bottom edge of the mirror. Lift up so the centre clip releases.
- Slide the screwdriver from side to side so that the outer clips release.
- Lift out the mirror insert.
- Replace the bulbs.
- Refit the insert top edge first. Be sure that the upper clips are properly depressed before pressing the insert back.

Fuses

General



Cable routing may vary slightly due to engine variant. However, the components listed are in the same positions.

All electrical functions and components are protected with a number of fuses to protect your car's electrical system from damage by short-circuits or overloads.

Fuses are housed in four different locations in the car:

1. Relay/fuse box in the engine compartment.
2. Fuse box in the passenger compartment within the sound barrier on the driver's side.
3. Fuse box in the passenger compartment at dashboard end on driver's side.
4. Fuse box in cargo area.

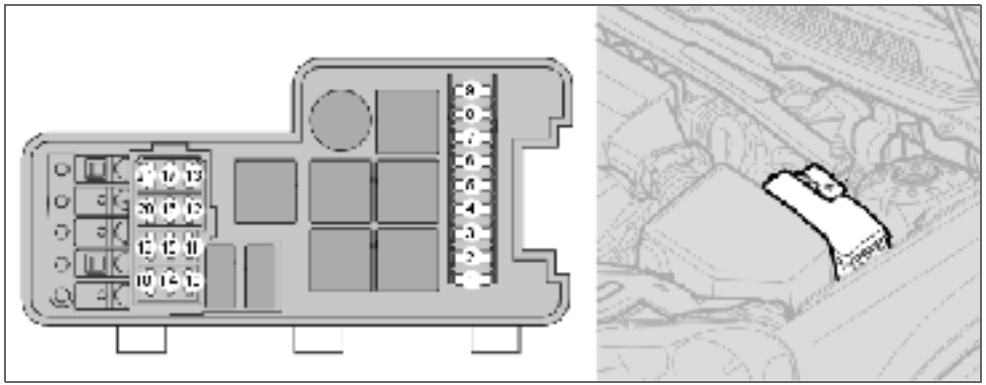
If an electrical component or function does not work, this may be because the component's fuse was temporarily overloaded and blew.

- Look in the fuse diagram to locate the fuse.
- Pull out the fuse and check from the side to see whether the curved wire has blown.
- If this is the case, replace it with a new fuse of the same colour and amperage.

There are a number of spare fuses in the cover on the end of the dashboard. There are also pliers which facilitate the removal and fitting of fuses.

If the same fuse blows repeatedly, there is a fault in the component. Contact an authorised Volvo workshop to have it checked.

Relay/fuse box in the engine compartment

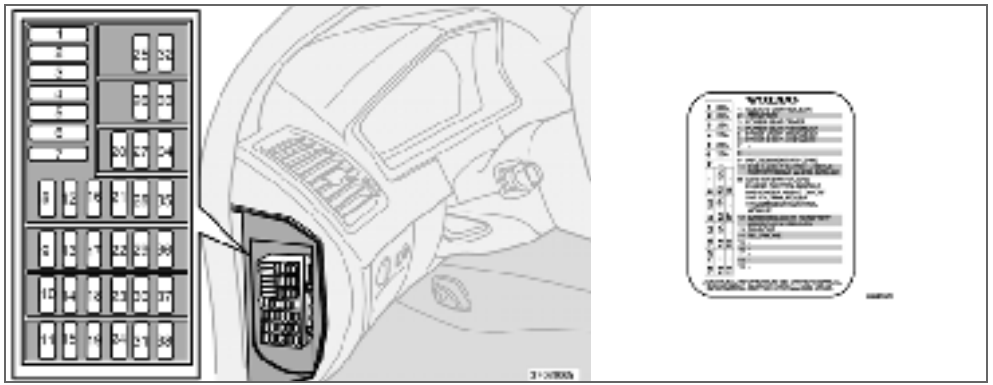


1. ABS..... 30 A
2. ABS ..... 30 A
3. High-pressure washer, headlamps ..... 35 A
4. Parking heater (option)..... 25 A
5. Auxiliary lamps (option)..... 20 A
6. Starter motor relay..... 35 A
7. Windscreen wipers ..... 25 A
8. Fuel pump ..... 15 A
9. Transmission control module (TCM), (V8, diesel, 6-cyl. petrol) ..... 15 A
10. Ignition coils (petrol), engine control module (ECM), injection valves, (diesel) ..... 20 A
11. Accelerator pedal sensor (APM), AC compressor, fan electronics box ..... 10 A
12. Engine control module (ECM) (petrol), injection valves (petrol), mass air flow sensor (petrol) ..... 15 A
    mass air flow sensor (diesel) ..... 5 A
13. Electronic throttle module (V8), VIS (6-cyl. petrol) ..... 10 A
    Electronic throttle module (ETM), solenoid valve, SWIRL (air mixing valve), fuel pressure regulator (diesel) ..... 15 A
14. Lambda-sond (petrol)..... 20 A
    lambda-sond (diesel) ..... 10 A

Fuses

15. Crankcase ventilation heater, solenoid valves, leakage diagnosis (5-cyl. petrol) ..... 10 A
    Crankcase ventilation heater (V8, 6-cyl. petrol), AC connection (V8, 6-cyl. petrol), solenoid valves, leakage diagnosis (V8, 6-cyl. petrol), ECM (V8, 6-cyl. petrol), mass air flow sensor (V8), glow plugs (diesel) ..... 15 A
16. Dipped beam, left ..... 20 A
17. Dipped beam, right ..... 20 A
18. - ..... -
19. Engine control module (ECM) supply, engine relay ..... 5 A
20. Position lamps ..... 15 A
21. - ..... -

Relay/fuse box in the passenger compartment at dashboard end on driver's side

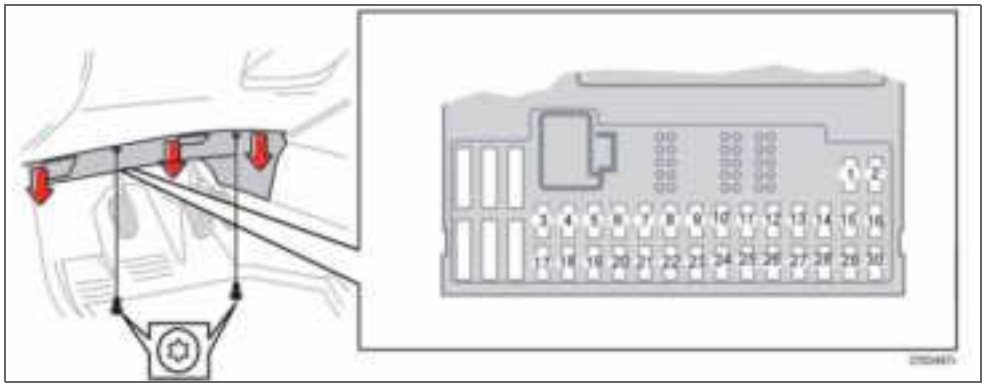


A decal which specifies the positions and amperages of the fuses is located in the end box cover.

1. Climate control system fan ..... 30 A
2. Audio (amplifier)..... 30 A
3. Power driver's seat ..... 25 A
4. Power passenger seat ..... 25 A
5. Control module, left front door..... 25 A
6. Control module, right front door..... 25 A
7. - .....-
8. Radio, CD player, RSE system ..... 15 A
9. RTI display, RTI unit MMM ..... 10 A
10. OBDII, light switch (LSM), Steering Angle Sensor (SAS), Steering Wheel Module (SWM)..... 5 A
11. Ignition switch, SRS-system, engine control module ECM (V8, 6-cyl. petrol) SRS deactivation passenger side (PACOS), electronic immobiliser (IMMO), Transmission control module TCM (V8, diesel, 6-cyl. petrol)..... 7.5 A
12. General lighting, ceiling (RCM) Upper electronic module (UEM) ..... 10 A
13. Sunroof..... 15 A
14. Phone ..... 5 A
15. -38 -..... -

Fuses

Relay/fuse box in the passenger compartment within the sound barrier on the driver's side

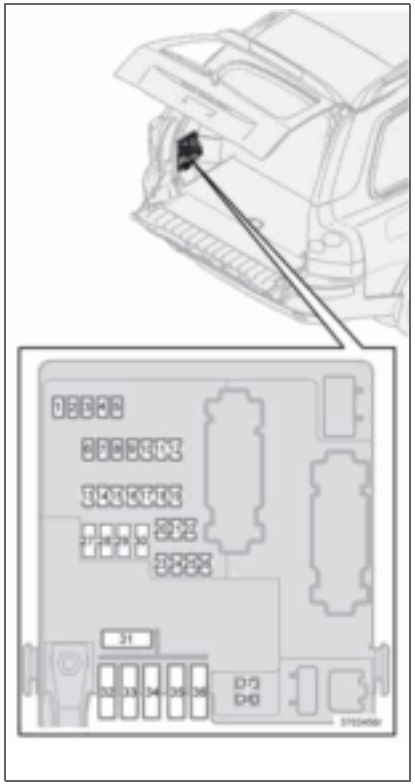


1. Seat heating, right side ..... 15 A
2. Seat heating, left side ..... 15 A
3. Horn ..... 15 A
4. Reserve ..... -
5. Infotainment system ..... 10 A
6. Reserve ..... -
7. Reserve ..... -
8. Siren ..... 5 A
9. Brake lamp switch feed ..... 5 A
10. Combined instrument panel (DIM), climate control (CCM), parking heater, power driver's seat ..... 10 A
11. Front seat, rear seat and refrigerator socket ..... 15 A
12. Reserve ..... -
13. Reserve ..... -
14. Reserve ..... -
15. ABS, STC/DSTC ..... 5 A
16. Electronic power steering (ECPS) Active Bi-Xenon (HCM), headlamp levelling ..... 10 A
17. Fog lamp, front left ..... 7.5 A
18. Fog lamp, front right ..... 7.5 A
19. Reserve ..... -
20. Coolant pump (V8) ..... 5 A

21. Transmission Control Module (TCM), reverse gear inhibitor (M66) ..... 10 A
22. Main beam, left ..... 10 A
23. Main beam, right ..... 10 A
24. Reserve ..... -
25. Reserve ..... -
26. Reserve ..... -
27. Reserve ..... -
28. Power passenger seat ..... 5 A
29. Fuel pump ..... 7.5 A
30. BLIS ..... 5 A
31. Reserve ..... -
32. Reserve ..... -
33. Vacuum pump ..... 20 A
34. Washer pump ..... 15 A
35. Reserve ..... -
36. Reserve ..... -

Fuses

Fuses in the cargo area



1. Reversing lamp ..... 10 A
2. Position lamps, fog lamps, cargo area lighting, number plate lighting, LEDs in brake lighting ..... 20 A
3. Accessories (AEM) ..... 15 A
4. Reserve ..... -
5. REM electronics ..... 10 A
6. Rear seat entertainment RSE (accessory) ..... 7.5 A
7. Towing bracket wiring (30-feed) ..... 15 A
8. Cargo area socket ..... 15 A
9. Rear right door: power window, power window lock ..... 20 A
10. Rear left door: power window, power window lock ..... 20 A
11. Reserve ..... -
12. Reserve ..... -
13. Diesel filter heater ..... 15 A
14. Subwoofer, rear air conditioning (AC) ..... 15 A
15. Reserve ..... -
16. Reserve ..... -
17. Infotainment system accessories ..... 5 A
18. Reserve ..... -
19. Rear wiper ..... 15 A
20. Towing bracket wiring (15-feed) ..... 20 A
21. Reserve ..... -
22. - ..... -
23. AWD ..... 7.5 A
24. Reserve ..... -
25. - ..... -

26. Parking assistance ..... 5 A
27. Main fuse: Towing bracket wiring, parking assistance, AWD ..... 30 A
28. Central locking system (PCL) ..... 15 A
29. Trailer lighting, left: position lamps, direction indicator ..... 25 A
30. Trailer lighting, right: brake lamp, rear fog lamp, direction indicator ..... 25 A
31. Main fuse: Fuse 37, 38 ..... 40 A
32. - ..... -
33. - ..... -
34. - ..... -
35. - ..... -
36. - ..... -
37. Heated rear window ..... 20 A
38. Heated rear window ..... 20 A

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CD functions 226
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Phone functions (option) 229
Menu structure – phone 236

INFOTAINMENT SYSTEM



10

General

Infotainment system

Infotainment is a system that integrates the audio system and phone functions.

You can easily and conveniently use your Infotainment system by means of the joint control panel or the steering wheel keypad.

The XC90 can be equipped with Dolby Surround Pro Logic II (Premium Sound), which offers an optimal sound experience very close to being there with a broad, natural sound profile.

The system also allows your passengers to use headphones (option) with separate sound sources.

Dolby Surround Pro Logic II

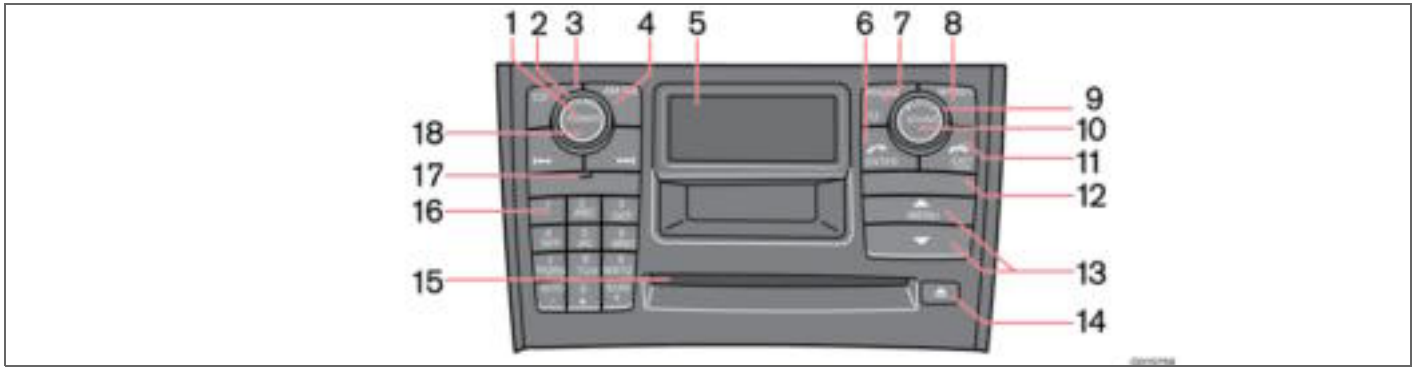
Dolby Surround Pro Logic II[1] distributes the two stereo audio channels to left, centre, right and rear speakers. This provides a more realistic sound quality than that provided by standard two-channel stereo.



Dolby Surround Pro Logic II and the Dolby icon are trademarks of Dolby Laboratories Licensing Corporation. The Dolby Surround Pro Logic II System is manufactured under license from Dolby Laboratories Licensing Corporation.

[1] Premium Sound.

Audio controls

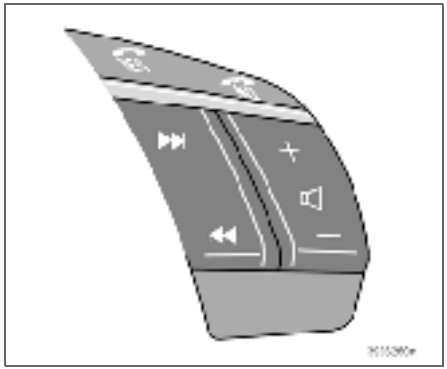


1. On/Off – Audio
2. Volume
3. **CD** – Shortcut
4. **AM/FM** shortcut button to switch between **FM1, FM2** and **AM**
5. Display
6. **ENTER** – select in the menu, activate a selection or activate the phone from standby mode
7. On/Off/Standby – Phone
8. **MY KEY** – programmable shortcut key for your favourite function
9. **SELECTOR** – select sound source
10. **SOUND** – make sound settings
11. **EXIT/CLEAR** – scroll back in the menu, cancel a selection, put the phone in standby mode, or erase the previous character when entering text and numbers.
12. **SIM** card holder
13. Menu selection buttons
14. CD and CD changer eject
15. CD player and CD changer (option)
16. Station setting buttons/selecting CD changer position (1-6), number/character buttons for the phone and menu shortcuts
17. **IR** receiver for remote controls (option)
18. Seek/change tracks/stations or scroll forward and back when entering text and digits

Control panels, audio

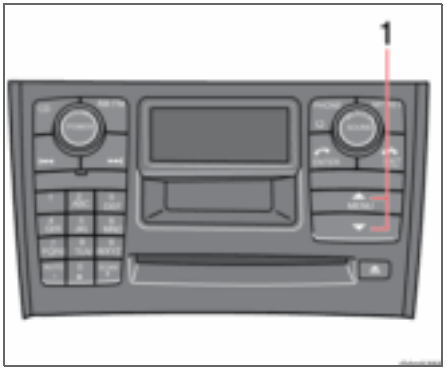
Steering wheel keypad

Audio – Phone



The four buttons at the bottom of the steering wheel keypad control both the radio and the phone. The function of the respective button depends on which system is active. The steering wheel keypad can be used to adjust volume, switch between preset stations and change CD tracks.

Menus



Some infotainment system functions are controlled via a menu system. The current menu level is shown at the top right of the display. Menu options are shown in the middle of the display.

- **MENU** leads to menu system. Up/down with the buttons (1) scrolls between menu options.
- **ENTER** selects or activates/deactivates a menu option
- **EXIT** goes back one step in the menu structure. A long press on **EXIT** will exit the menu system.

Shortcuts

Menu options are numbered and can also be selected directly with the keypad(**1-9**).

My own shortcut button – MY KEY

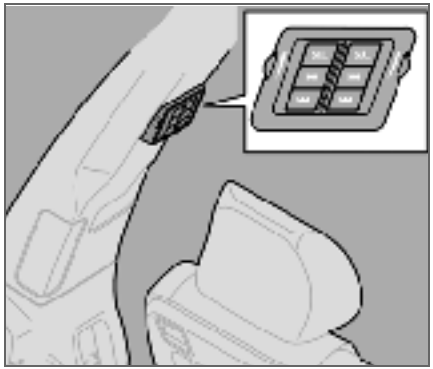
Use **MY KEY** to store a favourite function in the menu, e.g. **TP**.

– Select the function in the menu to be stored by holding **MY KEY** depressed for more than two seconds.

When MY KEY STORED is shown in the display, the function has been stored.

– Activate the function by briefly pressing **MY KEY**.

Control panel with headphones socket



Headphones with an impedance of 16–32 ohm and sensitivity of 102 dB or higher are recommended for best sound reproduction.

Activating/deactivating
The control panel is activated with **SEL**. when the audio system is active and deactivated automatically when the audio system is deactivated, or by means of a long press on **SEL**.

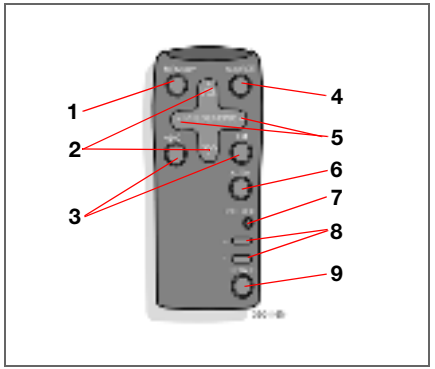
Scroll/search forward and backward
A short press on / scrolls between CD tracks or preset radio stations. A long press fast-winds CD tracks or searches radio stations automatically.

Limitations
The audio source (FM, AM, CD etc.) played back in the speakers cannot be controlled from the rear control panel.

RDS messages may not appear if the radio is playing back in the headphones while another audio source is playing back in the speakers.

Control panels, audio

Remote control (option)



1. **MEMORY** – Stores searched radio stations. To store a station:

– Press the **MEMORY** button

– Select Preset using **PRESET/DISC** (5)

– Confirm your selection using the Memory button

2. Volume
3. Seek/change tracks forward or back
4. **SOURCE** – switch sound source
5. **PRESET/DISC** – select CD changer position or preset radio station
6. **AUTO** – find and store the strongest stations
7. Function not available
8. Function not available
9. On/Off – Audio

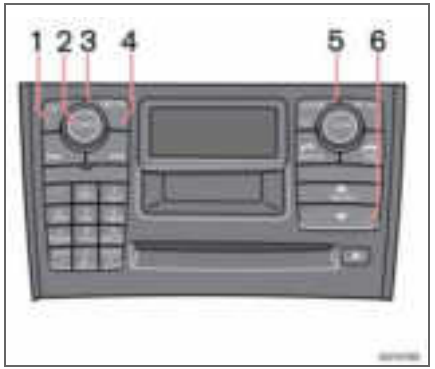


– Direct the remote control towards the IR receiver (see illustration) that is located in the dashboard.

NOTE

The remote control contains AAA batteries (R03). If the remote control does not work, first try replacing the batteries.

On/Off switch – Audio



Press the **POWER** button (2) to switch the audio system on or off.

If the audio system is active when the ignition is switched off, it will reactivate automatically when the car is restarted.

Volume control

Turn the knob (3) clockwise or anticlockwise to raise or lower the volume respectively. The volume control is electronic and has no end position. Volume can also be raised (+) or lowered (–) using the steering wheel keypad.

Selecting the sound source

Press the **AM/FM** (4) button repeatedly to toggle between FM1, FM2 and AM. CD (1) activates the CD player/changer.

Turn **SELECTOR** (5) to toggle between the external **AUX audio source** and the internal **FM1, FM2**, **AM,** CD and CD changer audio sources.

AUX

The **AUX** input can be used for connecting an MP3 player for example.

NOTE

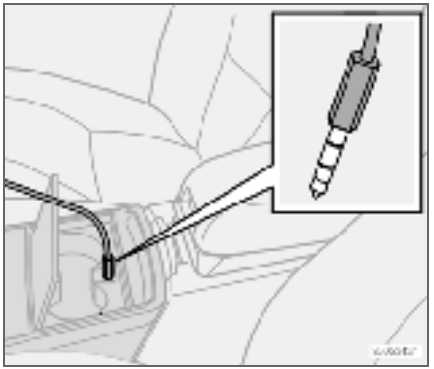
The audio quality may be impaired if the player is charged while the audio system is in AUX mode. In which case, avoid charging the player.

Sometimes the external **AUX** audio source can be heard at a different volume to the internal audio sources. If the audio volume of the external audio source is too high then the audio quality may be impaired. Prevent this by adjusting the input volume of the external audio source:

– Select AUX VOLUME in the menu and press **ENTER**.
– Control the volume with **SELECTOR** or up/down with the buttons (6). Finish with **ENTER**.

NOTE

Does not work for the steering wheel keypad.



*Input for external audio source (**AUX**) 3.5 mm*

IMPORTANT

The cover for the cup holders must be open when the connector is in the **AUX** input.

Audio system functions

Audio settings



– Press the **SOUND** button (1).
– Press the **SOUND** button repeatedly until you come to the function you wish to set. Choose **BASS, TREBLE, FADER, BALANCE, SUBWOOFER** (option), **CENTRE** (option) or **SURROUND** (option).
– Use the **SELECTOR** knob (2) to adjust the level. The display shows a scale from min. to max. position. The middle indicates the normal position.

.

NOTE

The level for the centre speaker can only be adjusted if Dolby Pro Logic II (DPL II) or three channel stereo (3-CH) is selected in the menu. The level for Subwoofer can only be adjusted if Subwoofer is activated

Programme type	Display shows
Bass	BASS
Treble	TREBLE
Balance between the left and right-hand speakers	BALANCE
Balance between the front and rear speakers	FADER
Level for bass speaker (option)	SUBWOOFER
Level for centre speaker (Premium Sound)	CENTRE
Level for surround sound (Premium Sound)	SURROUND

Surround

Surround settings[1] govern the spatial perception of the sound. The settings, including activating and deactivating for each respective audio source, are made separately.

The ◧◨ symbol in the display indicates that Dolby Pro Logic II is active. There are three different settings for surround sound:

- **PRO LOGIC II**
- **3-CHANNEL**
- **OFF** (two channel stereo)

Activating/deactivating surround sound

– Press **MENU**, scroll to Audio settings and press **ENTER**.
– Select **SURROUND** and press **ENTER**.
– Select **Pro Logic II**, **3 channel** or **Off** and press **ENTER**.

◧◨ Dolby Surround Pro Logic II is a trademark of Dolby Laboratories Licensing Corporation. Dolby Pro Logic II Surround System is manufactured under license from Dolby Laboratories Licensing Corporation.

[1] Certain models

Bass speaker – SUBWOOFER (option)

The bass speaker helps the system provide fuller sound and deeper bass.

– Select AUDIO SETTINGS in the menu and press **ENTER**.
– Select **SUBWOOFER** and press **ENTER**. A check in the box indicates that **SUBWOOFER** is activated.

Equalizer FR (certain models)

This function is used to fine-tune the sound from the front speakers.

– Select AUDIO SETTINGS in the menu and press **ENTER**.
– Select Equalizer FR and press **ENTER**.
– Use the menu selection buttons or the **SELECTOR** knob to set the level.
– Press **ENTER** to select the next frequency. You can select five frequencies.
– Press **ENTER** until you come to menu mode to save any changes.

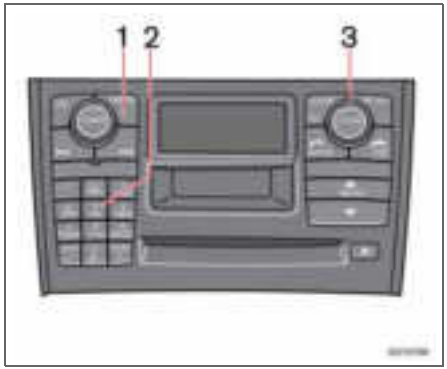
Equalizer RR (certain models)

This function is used to fine-tune the sound from the rear speakers.

– Select AUDIO SETTINGS in the menu and press **ENTER**.
– Select Equalizer RR and press **ENTER**.
– Use the menu selection buttons or the **SELECTOR** knob to set the level.
– Press **ENTER** to select the next frequency. You can select five frequencies.
– Press **ENTER** until you come to menu mode to save any changes.

Radio functions

Tuning



– Choose radio mode **AM/FM1/FM2** using the **SELECTOR** knob(3) or the **AM/FM** button (1).
– A short press on the ⏭ or ⏮ button is used to search for the next strong station.
– Press one of the buttons again to search again.

Manually seek known frequency

– Hold the ⏭ or ⏮ button depressed. MAN is shown in the display. The radio scans slowly in the selected direction and increases tempo after a few seconds.
– Release the button when the desired frequency shows in the display.
– Frequency can be adjusted with a short press on one of the arrow keys, ⏭ or ⏮.
– Manual adjustment mode stays in effect five seconds after the last press.

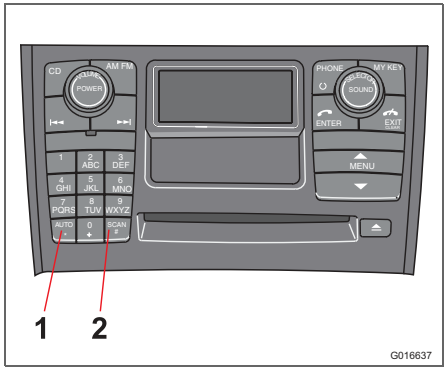
Storing stations

To store a selected station under one of the station setting buttons 0-9 (2):

– Set the desired station.
– Press the button under which the station is to be stored and keep it depressed. The sound will disappear for a few seconds and **STATION STORED** will be shown in the display. The station is now stored.

You can store up to 10 stations each for **AM**, **FM1** and **FM2**, i.e. a total of 30 stations.

AUTOSTORE – autostoring stations



AUTO (1) seeks out the ten strongest radio stations and stores them automatically in a separate memory. The function is especially useful in areas where the radio stations and their frequencies are unfamiliar.

Start autostoring

– Select wavelength using **AM/FM.**

– Hold **AUTO** (1) depressed until **AUTO-STORING...** appears in the display.

Once **AUTOSTORING...** disappears from the display, the stations are stored. The radio continues in Auto mode and **AUTO** appears in the display. The automatically stored stations can now be selected using the 0 - 9 buttons. If there is no station with an adequately strong signal then the display shows **NO AST FOUND**.

Cancelling automatic storage of stations

– Press **EXIT**.

Selecting an autostored preset

Allowing the radio to remain in Auto mode provides access to the autostored presets.

– Briefly press **AUTO** (1). **AUTO** appears in the display.

– Press one of the 0 - 9 buttons.

– The radio remains in Auto mode until it is exited by a brief press on **AUTO** (1), **EXIT** or **AM/FM**.

Scanning

SCAN (2) automatically searches for strong AM or FM stations. When a station is found, it is played for approx. eight seconds before scanning is resumed.

Activating/deactivating Scan

– Select wavelength using **AM/FM.**

– Press **SCAN** (2) to activate. **SCAN** appears in the display.

– Close using **SCAN** or **EXIT**.

Storing a station

A selected station can be stored as a preset while **SCAN** is active.

– Press one of the 0 - 9 buttons and hold it depressed until the message **Station stored** appears on the display.

SCAN is interrupted and the stored station can be selected as a preset.

RDS functions

Radio Data System – RDS links FM transmitters into a network. An FM transmitter in such a network sends information that gives an RDS radio the following functions:

- Automatically switches to a stronger transmitter if reception in the area is poor.
- Searches for programme form, such as traffic information or news.
- Receives text information on the current radio programme.

NOTE

Some radio stations do not use RDS or only a selected range of its functions.

Radio functions

Volume control – NEWS/TP/ALARM

NOTE

If a CD for example is playing when the radio receives a traffic bulletin, the CD player is put in pause mode. The message is played at the volume selected for that type of message. Playback of the originally selected audio source is then resumed at the previous volume. If volume is adjusted while the bulletin is played, the new volume is saved and used for the next bulletin.

News – NEWS

This function interrupts other sound sources, e.g. CD, when a news broadcast starts.

- Choose radio mode using the **SELECTOR** knob or the **AM/FM** button.
- Select **NEWS** in the menu and press **ENTER**.
- **NEWS** appears in the display.
- Select **NEWS** again and press **ENTER** to deactivate the **NEWS** function.

With this function, programmes from RDS stations that are news-coded will interrupt other audio sources using the volume setting for this specific purpose. As soon as the news broadcast is finished, the audio system returns to the previous audio source and resumes the previous volume setting.

If you do not wish to listen to a news item in progress:

- Press the **EXIT** button. The **NEWS** function remains active and the radio waits for the next news programme.

Traffic information – TP

This function interrupts other audio sources in order to broadcast traffic information from RDS stations. The message is heard at the volume set for this specific purpose. As soon as the message ends, the radio returns to the previous audio source and volume setting.

- Select **TP** in the menu and press **ENTER**.
- **TP** is shown in the display.
- Select **TP** again and press **ENTER** to deactivate the **TP** function.

TP is shown in the display when this function is active. If the set station can send traffic information then is shown in the display. Traffic information will only interrupt the sound source if is shown in the display.

If you do not wish to listen to a traffic bulletin in progress:

- Press the **EXIT** button. The **TP** function remains active and the radio waits for the next traffic bulletin.

TP Search

This function allows you to listen to traffic information when travelling between different countries and states in Europe without needing to select a station.

- Select **RADIO SETTINGS** in the menu and press **ENTER**.
- Select **TP** and press **ENTER**.
- Select **TP Search** and press **ENTER**.

To deactivate the function, select **TP Search** again and press **ENTER**.

Radio text

Some RDS stations send information on programme content, artists, etc. This information can be indicated with text in the display.

- Press the **MENU** button.
- Select **RADIO TEXT** in the menu and press **ENTER**.
- Select **RADIO TEXT** again and press **ENTER** to deactivate.

Alarm

Alarms are transmitted automatically and the function cannot be deactivated. **Alarm!** is shown in the radio display when an alarm message is broadcast. This function is used to warn motorists of major accidents and catastrophes, such as a bridge collapse or an accident at a nuclear plant.

Programme types – PTY

The PTY function can be used to select different programme types, such as Pop music and Serious classic. Use the PTY function to select from among the different programme types shown in the list below.

Display of programme type

- Select **RADIO SETTINGS** in the menu and press **ENTER**.
- Select **PTY** in the menu and press **ENTER**.
- Select **SHOW PTY** and press **ENTER**.

The PTY of the selected station is now shown in the display.

NOTE

Not all radio stations have a PTY designation.

Programme type	Display shows
Current affairs	CURRENT AFFAIRS
Religion	RELIGION
Varied discussions	VARIED SPEECH
Country music	COUNTRY MUSIC
Documentary	DOCUMENTARY
Finance	FINANCE
Folk music	FOLK MUSIC
Leisure and hobby	LEISURE & HOBBY
Children's progs	CHILDREN
Oldies music	OLDIES MUSIC
Information	INFORMATION
Jazz music	JAZZ MUSIC
Serious classic	SERIOUS CLASSIC
Culture and Art	CULTURES
Light classic	LIGHT CLASSIC
Easy listening	EASY LISTENING
National music	NATIONAL MUSIC
Pop music	POP MUSIC
Travel and holiday	TRAVEL
Rock music	ROCK MUSIC
Social affairs	SOCIAL AFFAIRS
Sport	SPORT
Drama	DRAMA
Phone In	PHONE IN
Education	EDUCATION
Science	SCIENCE
Weather & Metro	WEATHER
Other music	OTHER MUSIC

Searching for a specific programme type

This function helps you find programmes with a specific focus by searching the entire frequency band.

- Select **FM 1** or **FM2** and press the **MENU** button.
- Select **RADIO SETTINGS** and press **ENTER**.
- Select **PTY** and press **ENTER**.
- Choose **SELECT PTY** and press **ENTER**.
- Press **ENTER** for one or more of the listed programme types you select. The PTY symbol in the display illuminates when the first selection is made and the radio continues in standby for PTY.
- Once you have selected all desired types, select **EXIT/CLEAR** to exit the PTY list.
- Select **SEARCH PTY** and press **ENTER**. If the radio finds a station with the selected programme type, it is played through the speakers.
- If the radio finds a station that is unsuitable, continue the search with the  buttons.
- If no stations with the selected programme type are found, the radio resumes its previous frequency. PTY then remains in standby mode until the selected programme type is broadcast, at which time the radio automatically switches to the station sending the selected programme type.

In order to deactivate **PTY standby**, enter the menu and select **CLEAR ALL PTY**. The symbol **PTY** disappears from the display and the radio resumes normal mode.

Radio functions

Traffic information – TP STATION

Here, you set from which station traffic information is to be heeded.

Note that must be shown in the display for this to work.

Activating/deactivating TP STATION
Listen to the station from which traffic information is to be heeded.

- Select **RADIO SETTINGS** in the menu and press **ENTER**.
- Select **TP** and press **ENTER.**
- Select **TP Station** and press **ENTER**.
- Select **SET CURRENT** to activate or **RESET CURRENT** to deactivate and press **ENTER**.

NOTE

Now only traffic information from the stored station will by played.

News – NEWS STATION

Here, you set from which station news is to be heeded.

Note that the set station in question must be an RDS station for this to work.

Activating/deactivating NEWS STATION
Listen to the station from which news is to be heeded.

- Select **RADIO SETTINGS** in the menu and press **ENTER**.
- Select **NEWS STATION** and press **ENTER.**
- Select **TP Station** and press **ENTER**.
- Select **SET CURRENT** to activate or **RESET CURRENT** to deactivate and press **ENTER**.

NOTE

Now only news from the stored station will by played.

Automatic frequency update – AF

The AF function selects one of the strongest transmitters for a set station. The radio may sometimes need to search through the entire FM wavelength to find a strong transmitter. If this occurs, the radio mutes and **PI SEEK PRESS EXIT TO CANCEL** appears in the display.

Activating/deactivating AF

- Select **RADIO SETTINGS** in the menu and press **ENTER**.
- Select **AF** and press **ENTER**.

To deactivate **AF**, select **AF** and press **ENTER**.

Regional radio programme – REG

This function causes the radio to continue with a regional transmitter even if its signal strength is low.

- Select **RADIO SETTINGS** in the menu and press **ENTER**.
- Select **Regional** and press **ENTER**.
- **REG** is shown in the display.
- To deactivate **REG**, select **REG** again and press **ENTER**.

Enhanced Other Networks – EON

The EON function is particularly useful in urban areas with many regional radio stations. It allows the distance between the car and the radio station transmitter to determine when programme functions should interrupt the current audio source.

- **LOCAL** – interrupts only if the radio station transmitter is close.
- **DISTANT**[1] – interrupts if the station transmitter is far away, even if there is a lot of static.
- **OFF** – no interruption for programmes from other transmitters.

[1] Default/factory settings.

Activating/deactivating EON

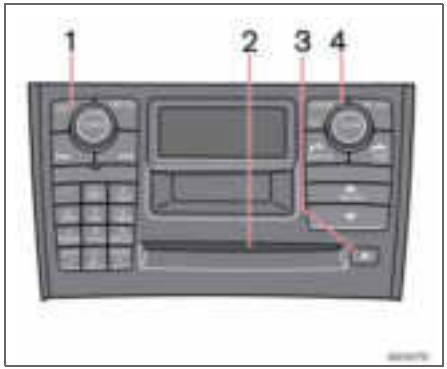
– Select **RADIO SETTINGS** in the menu and press **ENTER**.
– Select **EON** and press **ENTER**.
– Select **LOCAL, DISTANT** or **OFF** and press **ENTER**.

Resetting RDS functions

Resets all radio settings to the original factory settings.

– Select **RADIO SETTINGS** in the menu and press **ENTER**.
– Select **RESET ALL** and press **ENTER**.
– Press **ENTER** again to confirm.

CD functions



Start playback (CD player)

If a music CD is in the player when the audio system is in CD mode then playback is started automatically. Otherwise, load a disc and change to CD mode using **SELECTOR** (4) or **CD** (1).

Starting playback (CD changer)

If a CD position with a music CD is already selected when the audio system is activated then playback starts automatically. Otherwise change to CD changer mode using **SELECTOR** (4) or **CD** (1) and select a disc with the number buttons 1-6.

Inserting a CD (CD changer)

– Select an empty position with the number buttons 1-6 or Up/Down on the navigation button.

An empty position is marked in the display. The text **INSERT DISC** shows that a new disc can be inserted. The CD changer can hold up to six CDs.

– Insert a CD into the CD changer slot (2).

CD eject

A CD will stay in the ejected position for max. 12 seconds. Following which it is re-inserted into the player and playback continues.

Single discs (CD player)

Eject single discs by pressing the eject button (3).

All discs (CD changer)

Eject all discs with a long press on the eject button. The entire magazine is emptied disc by disc. The message **EJECTING ALL** is shown in the display.

This function can only be activated if the car is stationary. Eject is interrupted if the car begins to move.

Pause

If the volume is turned down completely, the CD player is stopped. The player is restarted when the volume is increased.

Audio files (option)

Apart from normal music CDs, the CD player supports MP3 and WMA format audio files.

NOTE

Certain types of copy-protected audio files cannot be read by the player.

When a CD containing audio files is inserted into the player the disc's directory structure is read in. It may take a while before playback starts depending on the quality of the disc.

Navigation and playback

If a disc containing audio files is inside the CD player then **ENTER** leads to the disc's directory structure. The directory structure system's menu structure. Audio files have the symbol ♩ and directories have the symbol 🗀. Before playback starts ⏮/⏭ can be used to show the audio file's name if the display is too narrow. Start playback of the selected audio file with ENTER.

When the playback of a file is finished the playback of the other files in the same directory continues. Directory change takes place automatically when all files in the current directory have been played back.

Fast-wind/change CD tracks and audio files

Short presses right/left on the / buttons are used to scroll between CD tracks/audio files. Long presses are used to fast-wind CD tracks/audio files. The steering wheel keypad can also be used for this purpose.

Scan CD

This function plays the first ten seconds of each CD track/audio file. Press **SCAN** to activate. Interrupt with **EXIT** or **SCAN** to continue playback of the current CD track/audio file. Scan only works on the selected disc. The text **SCAN** is shown in the display when the function is active.

NOTE

If disc text is activated then SCAN is not shown in the display.

Random

This function plays the tracks in random order. The random CD tracks/audio files can be scrolled through in the normal way.

NOTE

It is only possible to scroll between random CD tracks on the current disc.

Activating/deactivating (CD player)

If a normal music CD is being played:

– Select **RANDOM** in the menu and press **ENTER**.

If a disc with audio files is being played:

– Select **DISC** or **FOLDER** in the menu and press **ENTER**.

Activating/deactivating (CD changer)

If a normal music CD is being played:

– Select **Random** in the menu and press **ENTER**.

– Scroll to **SINGLE DISC** or **ALL DISCS** and press **ENTER**.

The **ALL DISCS** option only applies to the music CDs in the changer.

If a CD with audio files is being played:

– Select **SINGE DISC** or **FOLDER** in the menu and press **ENTER**.

– Scroll to the required CD or folder and press **ENTER**.

When you select another CD the function is deactivated.

Different messages appear depending on which random function is active:

- **RANDOM** means that the tracks from only one music CD are played.
- **RND ALL** means that all tracks on all music CDs in the CD changer are played.
- **RANDOM FOLDER** means that the audio files in a directory on the current CD are played.

NOTE

If disc text is activated then these messages are not displayed.

Disc text

If title information is stored on a CD then it can be shown in the display.

Activating/deactivating

Start CD playback.

– Select **DISC TEXT** in the menu and press **ENTER**.

CD discs

Using CD discs burned at home could result in poor or non-existent sound.

WARNING

Only use standard discs (12 cm in diameter). Do not use CDs with that have disc labels. The heat from the CD player could cause the label to come loose from the disc. The CD player could then be damaged.

Menu structure – audio system

FM menu

1. **NEWS**
2. **TP**
3. **Radio text**
4. **Radio Settings**
   - 4.1. PTY
   - 4.2. TP
   - 4.3. NEWS Station
   - 4.4. AF
   - 4.5. Regional
   - 4.6. EON
   - 4.7. Reset all
5. **Audio settings**[1]
   - 5.1. Surround
   - 5.2. Subwoofer[2]
   - 5.3. Equalizer Fr
   - 5.4. Equalizer Rr
   - 5.5. Reset all
6. **Audio settings**

AM menu

1. **Audio settings**[1]

See Audio settings in the FM menu.

CD menu

1. **Random**
2. **NEWS**
3. **TP**
4. **Disc text**
5. **Audio settings**[1]

See Audio settings in the FM menu.

AUX menu

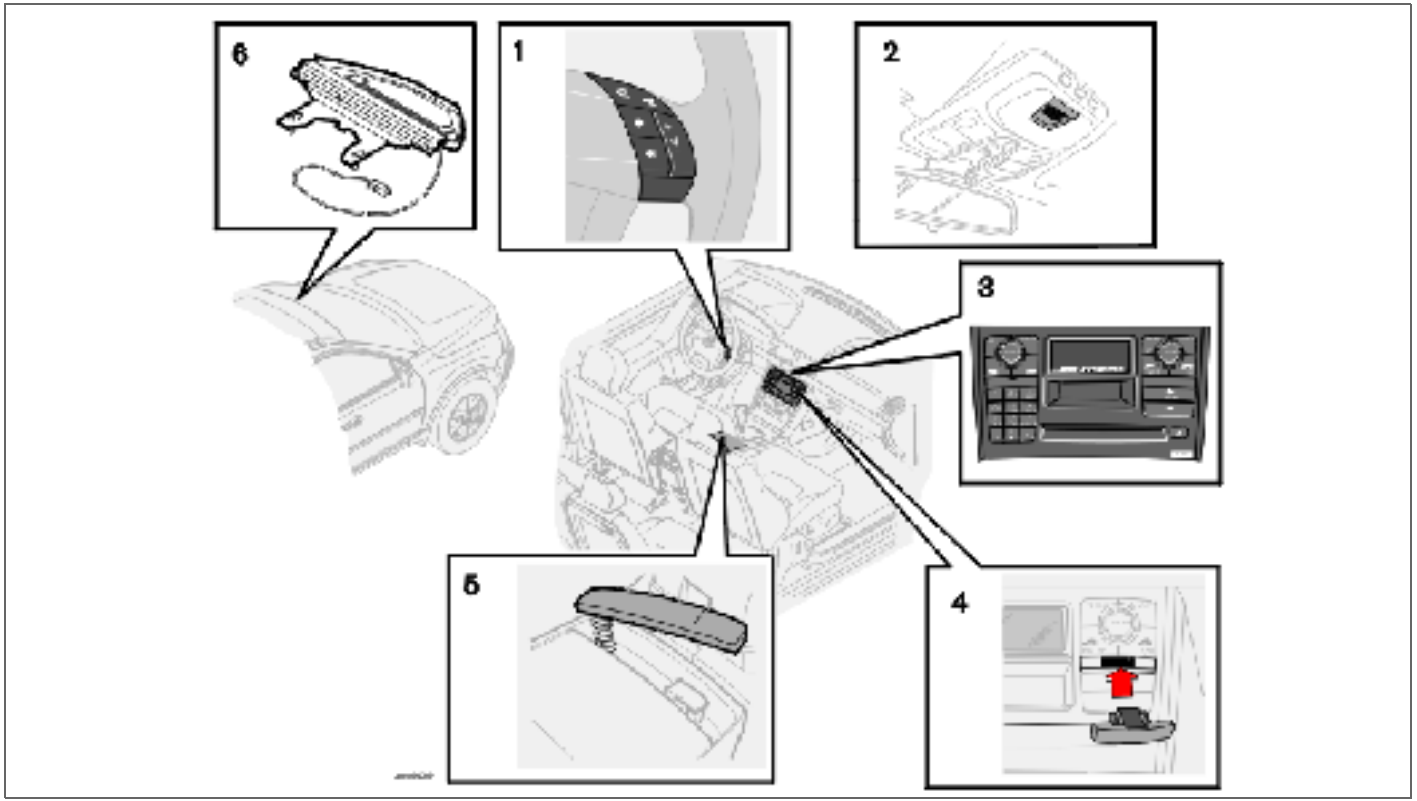
1. **AUX input vol**
2. **NEWS**
3. **TP**
4. **Audio settings**

See Audio settings in the FM menu.

[1] Certain models

[2] Option

Phone functions (option)



Phone system components

Phone functions (option)

Phone system components

1. Steering wheel keypad (option).
   You can control the majority of phone functions using the steering wheel keypad. When the phone is active, the steering wheel keypad can only be used for phone functions. When in active mode, phone information is always shown in the control panel display.
2. Microphone
   The handsfree microphone is integrated in the roof console beside the rearview mirror.
3. Centre console control panel
   All phone functions (except call volume) can be regulated via the control panel.
4. SIM card reader
   The SIM card is inserted into the front of the control panel.
5. Privacy handset (option)
   The privacy handset can be used when you do not wish to be disturbed.
6. Antenna
   The antenna is mounted against the windscreen, in front of the rearview mirror.

General

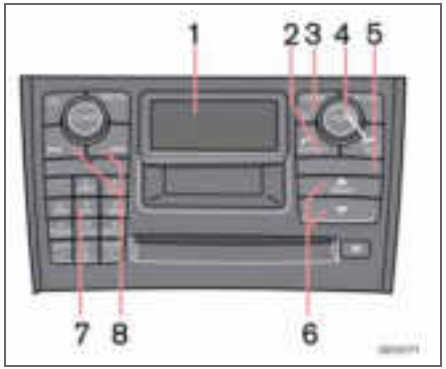
- Always put traffic safety first.
- If the driver needs to use the privacy handset, park the car in a safe place first.
- Switch off the phone system when refuelling the car.
- Switch off the system near blasting work.
- Only entrust phone system servicing to an authorised Volvo workshop.

Emergency calls

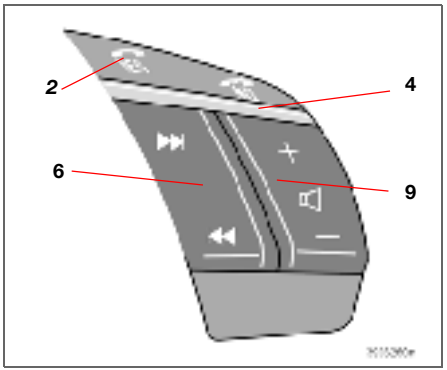
Emergency calls to alarm centres can be made without a SIM card as long as there is coverage by a GSM operator.

– Activate the phone.
– Ring the emergency number that applies to your region (within EU: 112).
– Press **ENTER** in the control panel or in the steering wheel keypad.

Controls



1. Display
2. **ENTER** – accept a call, make a menu selection or activate the phone from standby mode
3. On/Off/Standby
4. **EXIT/CLEAR** – terminate/refuse a call, scroll back in the menu, cancel a selection or erase entered digits/characters
5. SIM card holder
6. Menu selection buttons



7. Number/character buttons and menu shortcuts
8. Seek – scroll forward or back when entering text and numbers
9. Increase/decrease call volume during calls. The phone does not use the centre speaker[1]

[1] Option

On/Off/Standby switch

To activate the system:

– Press the **PHONE** button (3) to activate the phone system.

To switch off the system:

– Hold the **PHONE** button depressed to switch off the phone system.

Continuing with system in standby mode:

– The phone will continue in standby mode with a brief press of the **PHONE** button or if you press **EXIT/CLEAR**.
– Reactivate the system with the **PHONE** button.

When the phone is active or in standby mode, a handset is shown in the display.

NOTE

With the Performance audio system (standard level), it is not possible to listen to the radio, CD or receive traffic messages during a phone call.

If you switch off the car's ignition with the phone system on, it will be on the next time you switch on the ignition. No calls can be received when the phone system is switched off.

Phone functions (option)

Volume reduction during phone call

If the phone rings when the radio is switched on, the volume is lowered when the call is answered. When the call is concluded, the volume returns to the previously set level. Radio volume can also be adjusted during a phone call, whereby the newly selected level will resume when the call is concluded. Audio system volume can also be switched off completely during a phone call, see page 238.

This function only applies to the Volvo integrated phone system.

Standby mode

In standby mode, you can receive calls while the audio system is active and information from audio system sources is shown in the display.

To use other functions of the phone system, the phone must be in active mode.

Menu shortcuts

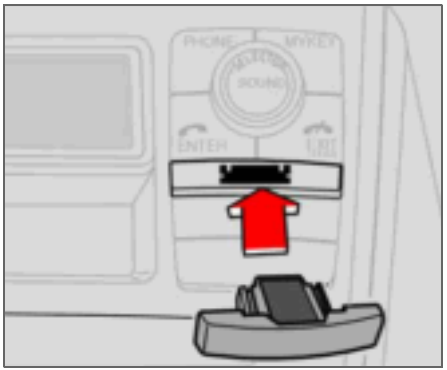
Once you have used the menu button to enter the menu system, you can use numbers instead of the arrows and the **ENTER** button to select the right menu in the main menu level. Each menu selection is numbered. The numbers are shown in the display together with the menu alternative.

Traffic safety

For reasons of safety, parts of the phone menu system cannot be accessed at speeds in excess of 8 km/h. You may only complete menu system activities that have already been started.

The speed limiter can be disconnected using menu function 5.6.

SIM card



The phone can only be used with a valid SIM card (Subscriber Identity Module). Your network operator supplies this card.

Always insert the SIM card when you wish to use the phone.

– Switch off the phone.
– Open the SIM card holder with a short press.
– Insert the SIM card with the metallic surface down.
– Make sure that the bevelled corner of the SIM card matches the bevel of the holder.
– Press in the holder.

Contact your network operator if you experience difficulties with the SIM card.

Making and receiving calls

To call:

– Dial the number and press **ENTER** on the steering wheel or the control panel keypad (or lift the handset).

To receive an incoming call:

– Press **ENTER** or lift the handset. You can also use Automatic Answer. See page 238.

The car's audio system can be muted automatically while a phone call is in progress, see page 238.

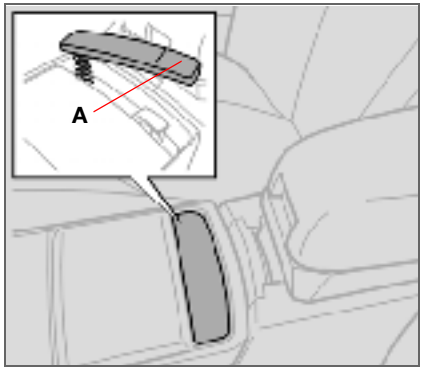
Ending a call

– Press **EXIT/CLEAR** on the steering wheel or control panel keypad or hang up the handset.

The audio system resumes its previous activity.

Refuse an incoming call by pressing **EXIT/CLEAR**.

Privacy handset



If you wish to speak without disruptions, use the privacy handset. Lift the handset by pressing briefly on the top (**A**).

– Select the desired phone number using the centre console keypad and lift the handset to place the call. Adjust the volume with the dial on the side of the handset.

The call is ended when you replace the handset in its holder.

If you wish to switch to handsfree without ending the call:

– Press on the steering wheel keypad (or control panel menu buttons) and select Handsfree.
– Press **ENTER** and replace the handset in its cradle. If the handset is already removed from its cradle when a call is started, the ringing party will be audible in the handsfree system.
– Press the **MENU** button, scroll to Handset and press **ENTER** in order to transfer to the handset.

Last dialled numbers

The phone automatically stores the last phone numbers/names called.

– Press **ENTER** in the steering wheel or control panel keypad.
– Use the menu buttons to scroll forward or back through the last numbers dialled. They are shown in the display.
– Press **ENTER**.

Speed dial

Storing speed dial numbers

A number stored in the phone book can be linked to a speed dial button (1–9).

Proceed as follows:

– Select **Phone book** in the menu and press **ENTER**.
– Scroll to Speed dial, (see page 238), and press **ENTER**.
– Select which number is to be the speed dial number. Press **ENTER** to confirm.
– Search for the desired name or phone number in the phone book. Press **ENTER** to select.

Using speed dial

– To make a call, press and hold the desired speed dial button for about two seconds or press the button briefly and then press **ENTER**.
– Once you switch on the phone, wait a moment before using speed dial.

NOTE

If you wish to use a speed dial number Menu 3.3.1, (see page 240), must be activated.

Call waiting

If you hear two beeps in your speaker during a phone call, someone else is calling. This function can be selected or deselected in the menu.

In this mode, you can choose to either take the call or refuse it. If you do not wish to take the call, press **EXIT/CLEAR** or do nothing.

If you do wish to take the call, press **ENTER**. Your current call will be put in "park mode". If you press **EXIT/CLEAR**, both calls will be simultaneously terminated.

Phone functions (option)

Functions during a call

The following functions are available during a call (scroll with the arrows and press **ENTER** to make a selection)

Secret mode/Secret mode off	Secret mode
Hold/Resume	Choose if the call is to be parked or resumed.
Handset/Handsfree	Using the handset or handsfree
Phone book	Show phone book

The following functions are available when you have a current call and a parked call (scroll with the arrows and press **ENTER** to make a selection)

Secret mode/Secret mode off	Secret mode
Handset/Handsfree	Using the handset or handsfree
Phone book	Show phone book
Three-way calling	Speak with both parties simultaneously (conference call)
Switch	Switch between the two calls

Call volume

Increase or decrease call volume during calls by pressing the + or – buttons in the steering wheel keypad.

When the phone is activated, the steering wheel keypad only controls the phone functions.

The phone must be in standby mode in order to adjust the audio system with these buttons, see page 232.

Phone book

Phone numbers and names can be stored in either the phone memory or the SIM card memory.

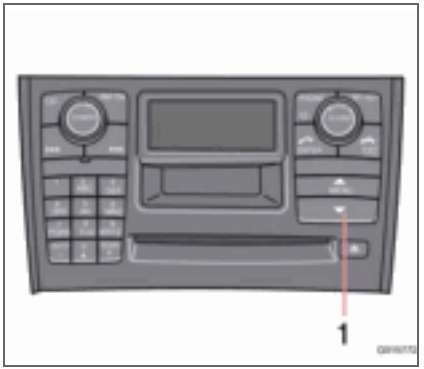
If the number of the person calling is found in the phone book, his or her name is shown in the display.

The phone memory can store up to 255 names.

Storing phone numbers with names

- Press the **MENU** button, select Phone book and press **ENTER**.
- Scroll to Enter item and press **ENTER**.
- Enter a name and press **ENTER**.
- Enter a number and press **ENTER.**
- Choose in which memory to save and press **ENTER.**

Dialling from the memory



- Press the MENU button's down arrow (1) or in the steering wheel to search in the phone book.

Choose from the following alternatives:

- Press **ENTER** and scroll with the arrows until you find the desired name.
- Press the key for the first letter of the name (or enter the entire name) and press **ENTER**.
- Press **ENTER** to call the selected number.

Enter a name or message

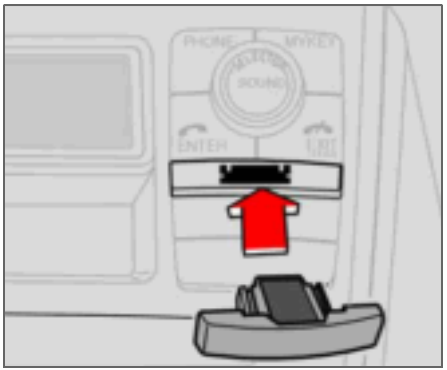
Press the button with the desired character: once for the first character, twice for the second, etc. Press 1 to enter a space.

1	space 1 - ? ! , . : " ' ( )
2	a b c 2 ä å à æ ç
3	d e f 3 è é
4	g h i 4 ì
5	j k l 5
6	m n o 6 ñ ö ò Ø
7	p q r s 7 ß
8	t u v 8 ü ù
9	w x y z 9
*	Used if two characters are to be ended with the same button.
0	+ 0 @ * # & $ £ / %
#	Switch between upper and lower case.
EXIT	Delete the last letter or number entered. If you press for a long time, the entire number and text is deleted.

Quitting text input:

- Clear all entered characters with a long press on the EXIT/CLEAR button.
- Return to the menu with an additional long press on the EXIT/CLEAR button.

Double SIM cards



Many network operators offer double SIM cards - one for your car and one for another phone. A double SIM card allows you to have the same number for two different phones. Ask your network operator about the offers available and the use of double SIM cards.

Specifications

Output	2 W
SIM card	small, 3 V
Memory entries	255[1]
SMS	yes
Data/fax	no
Dualband	yes (900/1800)

[1]The phone memory contains 255 positions. The number of SIM card memory positions varies depending on your subscription.

IMEI number

In order to block the phone, you must provide your network operator with the phone's IMEI number which is a 15-digit serial number that is programmed in the phone. To display this number, press *#06#. Make a note of this number and keep it in a safe place.

Menu structure – phone

Overview

1. Call log
- 1.1. Missed calls
- 1.2. Received calls
- 1.3. Outgoing calls
- 1.4. Erase list
  - 1.4.1. All calls
  - 1.4.2. Missed calls
  - 1.4.3. Received calls
  - 1.4.4. Outgoing calls
- 1.5. Call duration
  - 1.5.1. Last call
  - 1.5.2. Number of calls
  - 1.5.3. Total time
  - 1.5.4. Reset time

2. Messages
- 2.1. Read
- 2.2. Write
- 2.3. Message settings
  - 2.3.1. SMSC number
  - 2.3.2. Validity period
  - 2.3.3. Message type

3. Phone book
- 3.1. Enter item
- 3.2. Search
- 3.3. Copy all
  - 3.3.1. SIM to phone
  - 3.3.2. Phone to SIM
- 3.4. Speed dial
  - 3.4.1. Active
  - 3.4.2. Select number
- 3.5. Empty SIM
- 3.6. Empty phone
- 3.7. Memory status

4. Call options
- 4.1. Transmit number
- 4.2. Call waiting
- 4.3. Automatic answer
- 4.4. Automatic redial
- 4.5. Call divert
  - 4.5.1. All calls
  - 4.5.2. When busy
  - 4.5.3. When not answered
  - 4.5.4. Not reachable
  - 4.5.5. Fax calls
  - 4.5.6. Data calls
  - 4.5.7. Cancel all diverts

5. Tel. settings
- 5.1. Network selection
  - 5.1.1. Automatic
  - 5.1.2. Manual
- 5.2. Language
  - 5.2.1. English UK
  - 5.2.2. English US
  - 5.2.3. Español
  - 5.2.4. Français CAN
  - 5.2.5. Français FR
  - 5.2.6. Italiano
  - 5.2.7. Nederlands
  - 5.2.8. Português BR
  - 5.2.9. Português P
  - 5.2.10. Suomi
  - 5.2.11. Svenska
  - 5.2.12. Dansk
  - 5.2.13. Deutsch
- 5.3. SIM security
  - 5.3.1. On
  - 5.3.2. Off
  - 5.3.3. Automatic
- 5.4. Change codes
  - 5.4.1. PIN code
  - 5.4.2. Phone code
- 5.5. Volume
  - 5.5.1. Ringer volume
  - 5.5.2. Ring signal

5.5.3. Mute radio
5.5.4. Message beep
5.6. Traffic safety
5.6.1. Menu lock
5.6.2. IDIS
5.7. Factory settings

Description of menu options

1. Call log

1.1. Missed calls
List of missed calls. Choose to call, erase or store the number in the phone book.

1.2. Received calls
List of received calls. Choose to call, erase or store the number in the phone book.

1.3. Outgoing calls
List of previously dialled numbers. Choose to call, erase or store the number in the phone book.

1.4. Erase list
Erase the lists found in the menus 1.1, 1.2 and 1.3 as below.

1.4.1. All
1.4.2. Missed
1.4.3. Received
1.4.4. Outgoing

1.5. Call duration
Duration of all calls or of the most recent call. The phone code is required to reset the call timer (see menu 5.4).

1.5.1. Last call
1.5.2. Number of calls
1.5.3. Total time
1.5.4. Reset time

2. Messages

2.1. Read
Received text messages. Select whether to erase, forward, change or save the entire message or parts of it.

2.2. Write
Write a message using the keypad. Choose whether to save or send it.

2.3. Message settings
Enter the number (SMSC number) of the message centre to which messages are to be transferred as well as how long they are to be saved at the message centre. Contact your network operator for information on message settings. Normally, these settings should not be altered.

2.3.1. SMSC number
2.3.2. Validity period
2.3.3. Message type

3. Phone book

3.1. Enter item
Store names and phone numbers in the phone book, see page 234.

Menu structure – phone

3.2. Search
Search for a name in the phone book.

3.3. Copy all
Copy phone numbers and names from the SIM card to the phone memory.

3.3.1. From SIM to phone memory
3.3.2. From phone to SIM memory

3.4. Speed dial
A number stored in the phone book can be stored as a speed dial number.

3.5. Empty SIM
Erase the entire SIM card memory.

3.6. Empty phone
Erase the entire phone memory.

3.7. Memory status
Shows how many positions are occupied in the SIM card and phone memory. The table shows how many of the total number of positions are occupied, e.g. 100 (250).

4. Call options

4.1. Transmit number
Display or hide your phone number to/from the person you call. Contact your network operator regarding ex-directory numbers.

4.2. Call waiting
Be alerted during a phone call that there is another incoming call.

4.3. Automatic answer
Automatically answers incoming calls.

4.4. Auto re-dial
Calls a previously engaged number.

4.5. Diversions
Choose when and what type of calls are to be diverted to a specified phone number.

4.5.1. All calls (this setting only applies during the call in progress).
4.5.2. When busy
4.5.3. When not answered
4.5.4. Not reachable
4.5.5. Fax calls
4.5.6. Data calls
4.5.7. Cancel all diverts

5. Phone settings

5.1. Network selection
Choose a network automatically or manually. The selected operator is shown in the display in the phone's basic mode.

5.1.1. AUTO
5.1.2. Manual

5.2. Language
Select the phone language.

5.2.1. English UK
5.2.2. English US
5.2.3. Español
5.2.4. Français CAN
5.2.5. Français FR
5.2.6. Italiano
5.2.7. Nederlands
5.2.8. Português BR
5.2.9. Português P
5.2.10. Suomi
5.2.11. Svenska
5.2.12. Dansk
5.2.13. Deutsch

5.3. SIM security
Select if the PIN code should be on, off or if the phone should automatically give the PIN code.

5.3.1. On
5.3.2. Off
5.3.3. Automatic

5.4. Change codes
Change PIN or phone code. Make a note of the codes and keep them in a safe place.

5.4.1. PIN code

5.4.2. Phone code. The factory-set phone code 1234 is used until you change to your own code. The phone code is used to reset the call timer.

5.5. Volume

5.5.1. Volume. Adjust the ring signal volume.

5.5.2. Ring signal. There are seven different ring signals.

5.5.3. Mute radio. On/Off

5.5.4. Msg. beep

5.6. Traffic safety

5.6.1. Menu lock. Deactivating the menu lock allows access to the entire menu while driving.

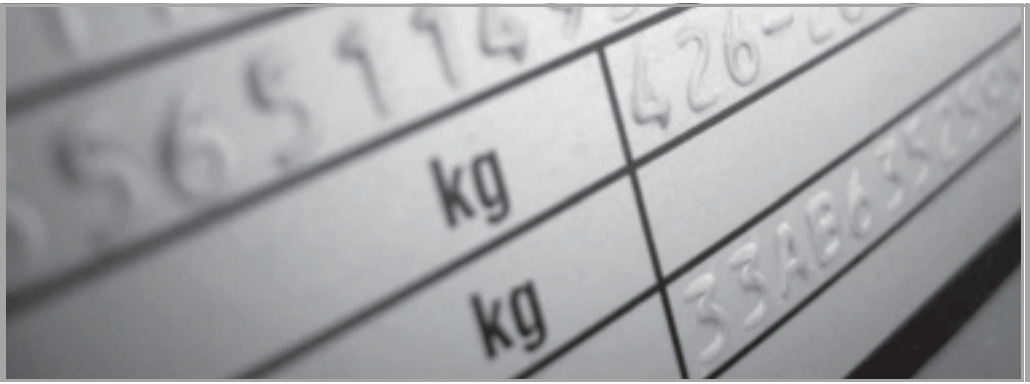
5.6.2. IDIS. If the IDIS function is deactivated, incoming calls are not delayed, regardless of the driving situation.

5.7. Factory settings

Reset the system's factory settings.

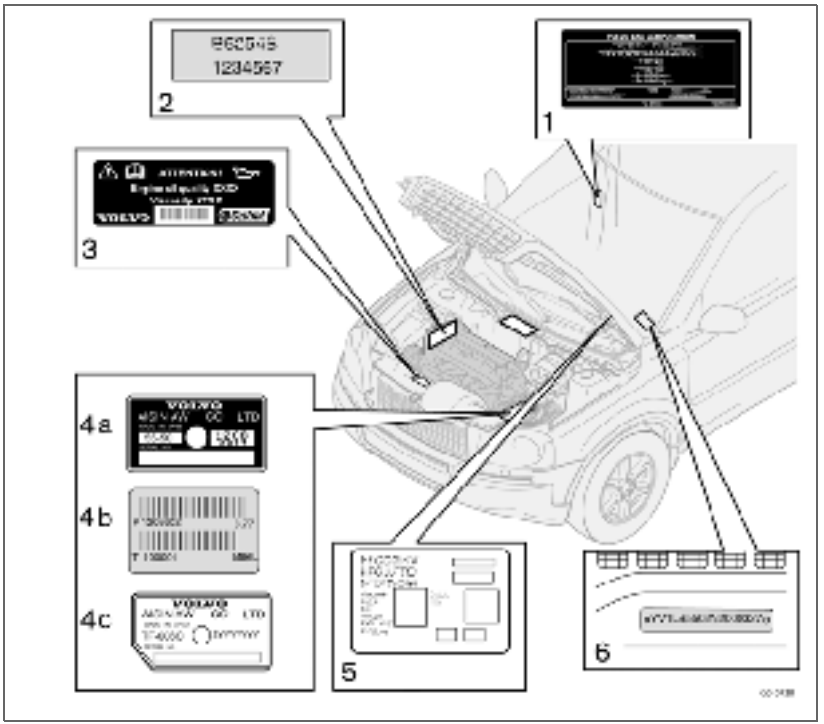
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01 10



11

Type designation



Knowing the car's type designation, vehicle identification and engine numbers can facilitate all contact with a Volvo dealer regarding the car and when ordering spare parts and accessories.

1. Type designation, vehicle identification number, maximum permissible weights, codes for colour and upholstery and type approval number.
2. Engine type designation, component and serial number.
3. Decal for engine oil.
4. Gearbox type designation and serial number:

   a: Automatic gearbox AW

   b: Manual gearbox

   c automatic gearbox
5. Decal for parking heater.
6. VIN number (type and model year designation plus chassis number).

Dimensions

Length: 481 cm

Width: 190 cm

Height: 178 cm

Wheelbase: 286 cm

Front track: 163 cm

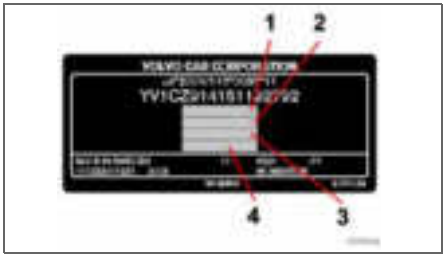
Rear track: 162 cm

Weights

The kerb weight includes the driver, the fuel tank 90 % full and all fluids. The weight of passengers and accessories, such as a tow-bar, towball load (when a trailer is hitched, see table), load carriers, and space box etc. influence the payload and must not be included in the kerb weight. Permitted weight (in addition to driver) = Gross vehicle weight–Kerb weight.

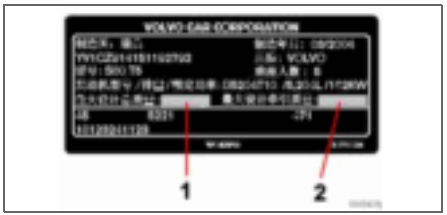
WARNING

The car's driving characteristics change depending on how heavily it is loaded and how the load is distributed.



See decal location on page 242.

1. Max. total weight
2. Max. train weight (car+trailer)
3. Max. front axle load
4. Max. rear axle load



Only for China

1. Max. total weight
2. Max. trailer weight

Maximum load: See registration document.

Maximum roof load: 100 kg

Trailer with brakes

	Maximum trailer weight kg	Maximum towball load kg
1.6	1200	75
1.6D	1300	
1.8	1300	
2.0	1350	
others	1500	

Trailer without brakes

Maximum trailer weight kg	Maximum towball load kg
700	50

Engine specifications

	2.5T	V8	3.2	D5
Engine designation	B5254T2	B8444S	B6324S	D5244T4
Output (kW/rpm)	154/4980	232/5850	175/6200	136/4000
(hp/rpm)	210/5000	315/5850	238/6200	185/4000
Torque (Nm/rpm)	320/1500-4500	440/3900	320/3200	400/2000-2760
No. of cylinders	5	8	6	5
Bore (mm)	83	94	84	81
Stroke (mm)	93.2	79.5	96	93.2
Swept volume (litres)	2.52	4.41	3.2	2.40
Compression ratio	9.0:1	10.4:1	10.8:1	17.0:1

Engine type designation, component and serial number can be read on the engine, see page 242.

Adverse driving conditions

Check the oil level more frequently for long journeys:

- towing a caravan or trailer
- in mountainous regions
- at high speeds
- in temperatures colder than –30 °C or hotter than +40 °C.

This can produce abnormally high oil temperature or oil consumption.

Also check the oil level more often if the car is often driven short distances (less than 10 km) when temperatures are low (below +5 °C).

Choose a fully synthetic engine oil for adverse driving conditions. It provides extra protection for the engine.

Volvo recommends Castrol oil products.

IMPORTANT

In order to fulfil the requirements for the engine's service intervals all engines are filled with a specially adapted synthetic engine oil at the factory. The choice of oil has been made very carefully with regard to service life, starting characteristics, fuel consumption and environmental impact. An approved engine oil must be used in order that the recommended service intervals can be applied. Only use a prescribed grade of oil (see the engine compartment decal) for both filling and oil change, otherwise you will risk affecting service life, starting characteristics, fuel consumption and environmental impact. Volvo Car Corporation disclaims all warranty liability if engine oil of the prescribed grade and viscosity is not used.

Viscosity chart



Engine oil

Oil decal



When the oil decal shown alongside here is in the car's engine compartment, the following applies. See location on page 242.

Oil grade: ACEA A5/B5

Viscosity: SAE 0W–30.

Engine variant		Volume between MIN–MAX (litres)	Volume[1] (litres)
2.5T	B5254T2	1.2	5.5
3.2	B6324S	0.8	7.3
V8 AWD	B8444S	1.2	6.7
D5 AWD	D5244T4	2.0	6.2

[1]Including filter change.

Fluids and lubricants

Fluid	System	Volume	Recommended oil grade
Gearbox oil	Manual 6-speed (M66)	2.0 litres	Transmission fluid: MTF 97309
	Automatic gearbox (TF-80SC)	7.0 litres	Transmission fluid JWS 3309
Coolant	Petrol engine 3.2	9.7 litres	Coolant with corrosion inhibitor mixed with water, see packaging. The thermostat starts opening at: 90 °C in petrol engines and at 82 °C in diesel engines.
	Petrol engine V8	10.2 litres	
	Diesel engine D5	12.5 litres	
Air conditioning[1]			Oil: PAG, Refrigerant: R134a (HFC134a)
Brake fluid		0.6 litres	DOT 4+
Power steering	System:	1.0 litre	Power steering fluid: WSS M2C204-A or equivalent product with same specifications.
	of which reservoir	0.2 litres	
Washer fluid		6.5 litres	Use a washer antifreeze recommended by Volvo, mixed with water for temperatures below freezing.

[1]Weights can vary depending on the engine variant. Contact an authorised Volvo workshop for the exact information.

IMPORTANT

The recommended transmission fluid must be used to prevent damage to the gearbox. Do not mix with any other transmission fluid. If the transmission is topped up with a different fluid, contact an authorised Volvo workshop for servicing.

NOTE

Under normal driving conditions the gearbox oil does not need changing during its service life. However, it may be necessary under adverse driving conditions, see page 245.

Fuel

Consumption, emissions and volume

Engine		Gearbox	Consumption litre/100 km	Emissions of CO_2 (g/km)	Tank volume (litres)
2.5T	B5254T2	Manual 6-speed (M66)	11.1 (11.2)[1]	266 (269)[1]	80
		Automatic gearbox (AW 55-51)	11.7 (11.8)[1]	280 (282)[1]	
3.2	B6324S	Automatic gearbox (TF 80SC)	11.6 (11.8)[1]	277 (281)[1]	
V8 AWD	B84444S		13.3 (13.5)[1]	317 (322)[1]	
D5 AWD	B5244T4		9.0 (9.0)[1]	239 (239)[1]	68
		Manual 6-speed (M66)	8.2 (8.3)[1]	217 (219)[1]	

[1]Applies to the variant seating seven.

Fuel consumption and emissions of carbon dioxide

Official fuel consumption figures are based on a standard driving cycle in accordance with EU Directive 80/1268 comb. Fuel consumption figures may change if the car is equipped with extra equipment that affects the car's weight. The manner in which the car is driven and other non-technical factors can also affect fuel consumption. Consumption is higher and power output lower for fuel with an octane rating of 91 RON.

Petrol

Most engines can be run with octane ratings of 91, 95 and 98 RON.

- 91 RON must not be used for 4-cylinder engines and should only be used in exceptional cases with other engines.
- 95 RON can be used for normal driving.
- 98 RON is recommended for optimum performance and minimum fuel consumption.

When driving in temperatures above +38 °C, it is recommended to use fuel with the highest possible octane rating for optimum performance and fuel economy.

Petrol: Norm EN 228

IMPORTANT

Use only unleaded petrol to avoid damaging the catalytic converter. In order for the Volvo warranty to apply, never mix alcohol with petrol, the fuel system could be damaged.

Diesel

The diesel engine's fuel system is sensitive to contaminants, see page 187.

Diesel: Norm EN 590 or JIS K2204

Catalytic converter

General



The purpose of the catalytic converter is to purify exhaust gases. It is located in the flow of exhaust gases close to the engine so that it quickly reaches operating temperature. The catalytic converter consists of a monolith (ceramic or metal) with channels. The channel walls are lined with a thin layer of platinum, rhodium and palladium. These metals act as catalysts, i.e. they participate in and accelerate a chemical reaction without being used up themselves.

Lambda-sond™ oxygen sensor

The Lambda-sond is part of a control system intended to reduce emissions and improve fuel economy.

An oxygen sensor monitors the oxygen content of the exhaust gases leaving the engine. This value is fed into an electronic system that continuously controls the injection valves. The ratio of air to fuel is continuously adjusted. These adjustments create optimal conditions for efficient combustion, and together with the three-way catalytic converter reduce harmful emissions (hydrocarbons, carbon monoxide and nitrous oxides).

General

12 V system with a voltage-regulated alternator. Single pole system in which the chassis and engine block are used as conductors.

Battery

	2.5T	3.2	V8	D5
Voltage	12 V	12 V	12 V	12 V
Cold start capacity (CCA)	600 A[1]	520 A[1]	600 A[1]	800 A
Reserve capacity (RC)	120 min	100 min	125 min	150 min
Capacity (Ah)	70	60	70	90

[1]Cars with a parking heater have 800 A

If the battery is changed, replace it with a battery of the same cold start capacity and reserve capacity as the original (see the decal on the battery).

Electrical system

Bulbs

Lighting	Output W	Socket
Main beam/dipped beam halogen	55	H7
Main beam, Active Bi-Xenon	65	H9
Active Bi-Xenon	35	D1S
Main beam Bi-Xenon	55	H7
Bi-Xenon	35	D2R
Fog lamp, front	55	H1
Position lamps front/rear, parking lamps front, side marker lamps front, number plate lighting, courtesy lighting rear	5	W2.1 x 9.5d
Front direction indicators, rear fog lamp	21	BAY9s
Brake lamp, reversing lamp	21	BA15S
Rear direction indicators	21	BAU15s
Vanity mirror	1.2	SV5.5
Front courtesy lighting, cargo area lighting	5	SV8.5
Glovebox lighting	3	BA9

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